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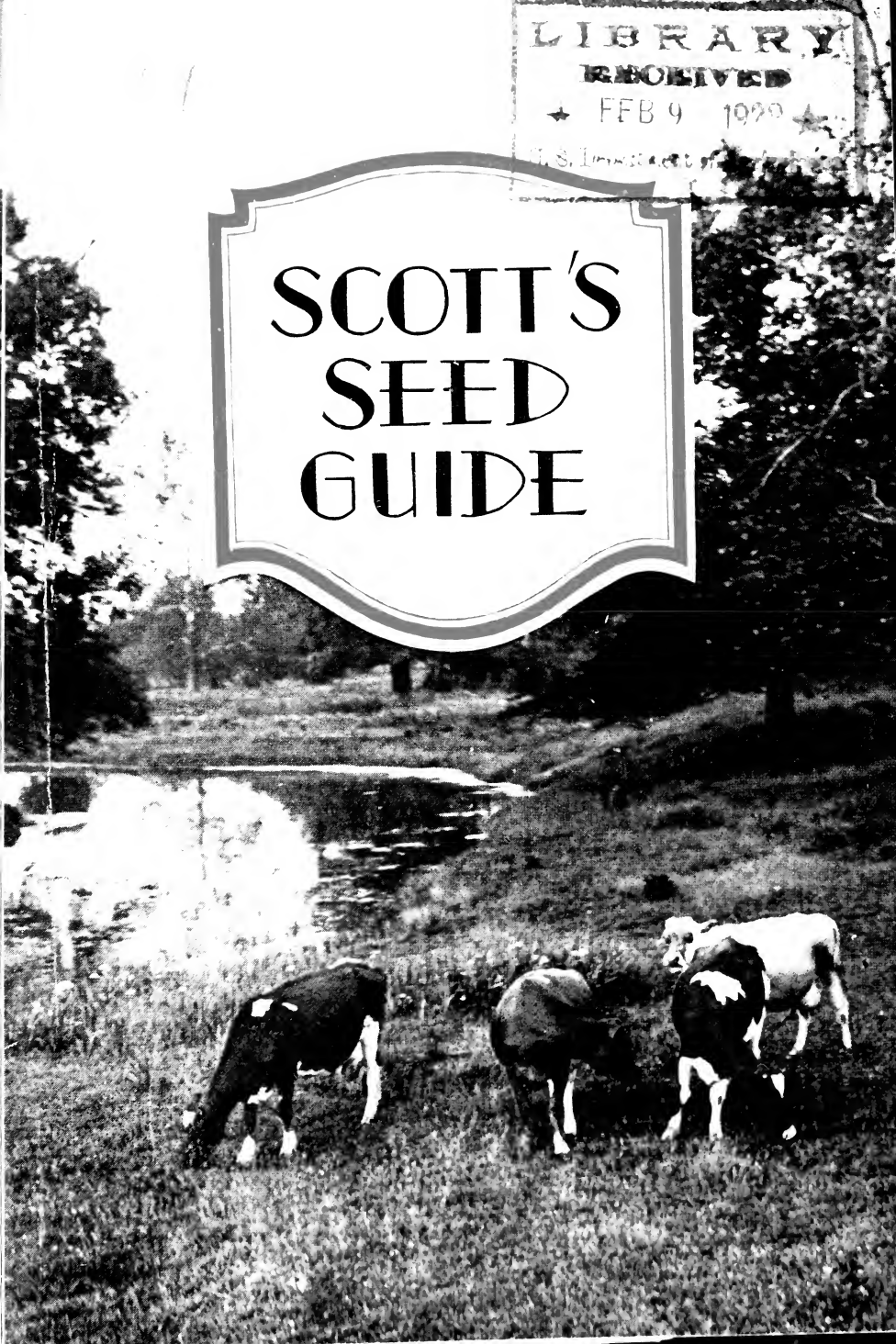
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U.S. DEPARTMENT OF AGRICULTURE

# SCOTT'S SEED GUIDE





*This beautiful country estate is the property of Windsor T. White, President of the White Motor Company of Cleveland. It is known as HALFRED FARMS and is located near Chagrin Falls. We are proud of having supplied this model farm with 9 tons of Scott's Seeds and 47 cans of Scott's Bacteria in the last eight years.*

# **SCOTT'S SEED GUIDE**

*for  
1929*



**O. M. Scott & Sons Co.**

**Marysville, Ohio**

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## Foreword

Although our first book about field seeds was published twenty years ago, the purpose was the same then as it is now, namely, to furnish worthwhile and usable information about farm crops. While a catalog, by Webster's definition is simply a *list* of things offered—a *guide* points the way and it is our aim with this edition of Scott's Seed Guide to point the way more clearly toward larger farming profits at a time when profits are so necessary.

"Your new Seed Guide (1928) is at hand. It is some book and surely is full of good reading, each year they get a little better. I always keep mine each year until I get a new one. Always put a string in them and hang them up where I can refer to them whenever I wish."—W. C. Farrington, Belleville, Richland County, Ohio.

Mr. Farrington not only appreciates that Scott's Seed Guide is *good*, but he also knows that Scott's Seed is *good*. He *knows* this because he has purchased his seed requirements from us every year since 1912. And this brings us to the important consideration, *What is good seed anyhow and how can I tell it.*



## How To Know Good Seed

The qualifications which usually determine whether seed is good, are freedom from weeds, absence of waste or inert matter, good germination. Of these three the most important is freedom from weeds. Sowing chaff or dead grains wastes money on that particular crop, but this is usually the extent of the damage. Sowing weeds, however, not only wastes money on the particular crop—by robbing the soil of plant food and moisture, increasing harvest costs, lowering the value of the crop—but puts weeds on your farm which will decrease the value of future crops. It will pay you to examine the seed you intend to sow, to avoid sowing weedy seed. A means of identifying some of the worst weeds is given on pages 8, 9 and 10.

Your own State Department of Agriculture will analyze seed samples for you without charge. This is the best way to learn the real value of seed, but if it isn't convenient to wait for their report you can determine for yourself what the seed you propose buying is actually worth. A certain yet simple method is given here.

### *Test for Purity*

Take a level teaspoonful of each of the seed samples which you want to examine. Place them in separate piles on a piece of white paper. Scrape to the side of each pile all waste matter, such as weed seed, chaff, and dead grains. This operation will show you the amount of worthless matter in each lot and is your guaranty of getting pure seed and your money's worth.

Remember, that a bushel of seed will contain six thousand times the waste matter or weed seeds found in a teaspoonful, and that three weeds in a teaspoonful means that one will be sowed on every square yard of ground.





### *Test for Germination*

To make a germination test, remix the seed and count out 100 seeds. Be sure to take them just as they come, and do not choose the best grains, for the object is to find out what percentage of the total seed will grow.

The seed may be planted in a box of moist dirt or sand, or may be put between two blotters or strips of cotton flannel, placed on a plate covered with another plate turned upside down. This prevents evaporation. Keep the blotters moist, but not in water, and as near the temperature of 70 degrees as possible. Examine the seeds daily and see how they are germinating. Sprouted seeds may be removed each day if desired. Some seeds require a longer time to germinate than others. The proper germinating periods are as follows:

Clover seed between three and six days.

Timothy and Red Top, five to eight days.

Orchard Grass, six to fourteen days.

Kentucky Bluegrass, fourteen to twenty days.

The use of these tests has convinced many seed buyers that it is to their decided advantage to sow Scott's Seed every year. They write us that they are grateful for a source of good seed, and prove this by sending us their orders each season. In speaking of Scott's Seed Mr. Henry A. Lechner, of Hillsdale, Indiana County, Pennsylvania, says:

"Your seed was first tried about eight years ago and we were satisfied for we haven't had any bad weeds to pull since. We believe your seed is the best and cleanest that is sold."

There are very definite reasons why our customers have results like Mr. Lechner's. This business was founded for the purpose of supplying field seeds of the best possible quality, and, above all things, free from weed seeds. The next few pages tell how we are able to do this.



## Why Scott's Seeds

You are urged to buy Scott's Seeds, not because they are of some unusual strain which will give extravagant yields, but because they are unusually free from weeds and waste matter. This has been our appeal to seed buyers since 1870, when the business was established by the late O. M. Scott.

To furnish seed of Scott quality it is necessary for us, first of all, to select it carefully. More than 50% of the seed, which we examine in the selection of our stocks, is rejected because it cannot be re-cleaned up to our minimum requirement. Some weed seeds cannot be removed, no matter how many times the seed is re-cleaned. Another important precaution in selecting the seed is to get that which we know is adapted to growth in the sections where our customers expect to sow it. Here again, our 59 years experience in the seed business is of real benefit to our customers.

### *Carefully Selected*

"You asked me in your last letter if someone had told me about you. I was talking to Mr. F. G. Miller, of Chambersburg, and told him that I had had trouble in getting alfalfa to grow. He told me he had the same trouble until he got the seed from you people and since he had no trouble at all."—A. J. Lang, Cabot, Butler County, Pennsylvania.

Sowing unadapted varieties of seed almost always results in failure. Most of the imported seed, and much that is grown in our Southwestern States is not satisfactory for use north of the Ohio River. This is especially true as regards the winter hardiness of alfalfa. You can buy Scott's Seed with the assurance

that you will get seed adapted to growth in your territory.

## *Carefully Recleaned*

Even after we have carefully selected the seed, the battle is only half won. Waste matter, and more particularly weeds, must be removed by thorough recleaning. This is done very carefully and in a way that causes our customers to send us their orders with as much confidence as does Mr. W. F. Miller of Zenith, Monroe County, West Virginia.

"I received my seed and it looked all right. I have been getting very fine seed from you and don't believe I have had a bad weed yet."

In spite of the care used in selecting and cleaning Scott's Seeds they actually cost you less than impure seed. The large amount of bulk we remove in the form of waste matter and weeds means much more to the purchaser than any slight difference in price.

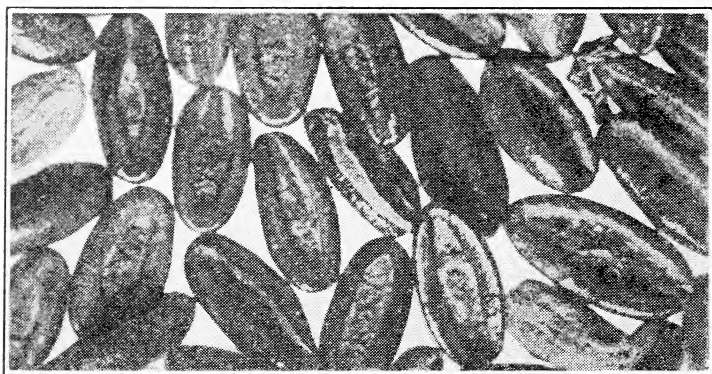
"Since writing you my order of soybeans, clover seed and oats arrived. I am highly pleased with all the seeds I received from you. I first learned of your reputation for good seeds and honest dealing from my father, R. W. Patterson, who was an old customer of yours."—Aurice M. Patterson, R. No. 2, Norwich, Ohio.

Fifty pounds of pure, practically weedless, clover seed will give you a more profitable stand on a five acre field than will 60 pounds of inferior seed. That means instead of paying \$15.00 for a bushel of inferior seed, you could better afford to buy 50 pounds of a \$17.50 grade of seed which would cost you only about \$14.50 and yet produce a better crop. To the seller there is always a bigger profit on second grade seed. *To the sower there is always a bigger profit on pure seed.*



## Noxious Weeds

The real way to fight weeds is to refuse to buy inferior seed, which usually contains weed seeds. Believing that the *prevention* of weeds by sowing pure seed will go a long way in eradicating them, we are describing a few of the worst weeds on this and the following pages.



*Buckhorn seed under the microscope*

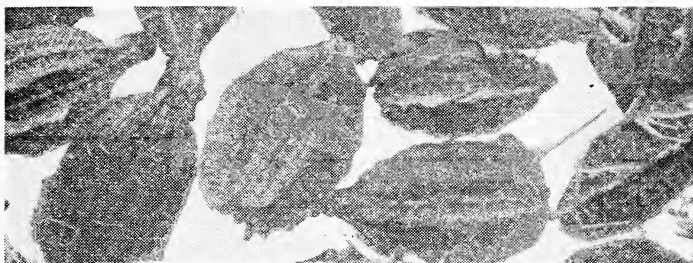
**BUCKHORN.** Found very often in clover and alfalfa seed, as the buckhorn seeds are practically the same size and cannot be cleaned out of clover except by special machinery. The seeds are brown, hollow and grooved on one side and moisture causes them to become sticky.

This perennial can be controlled by cultivation and sowing pure seed. Badly infested fields should be plowed up and worked under a short rotation of crops.

**WILD CARROT.** Also common in grass and clover seeds. As it is a biennial it can be gotten rid of by preventing seed development. It rarely infests

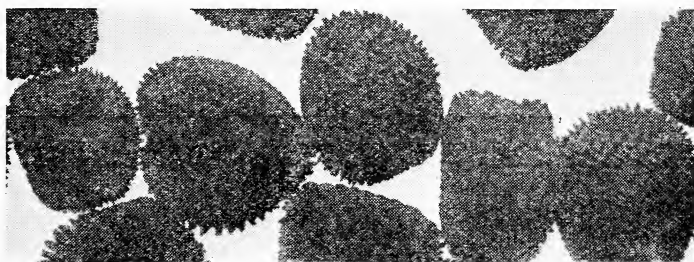


fertile soils, and so where abundant an extra effort should be made to build up the soil.



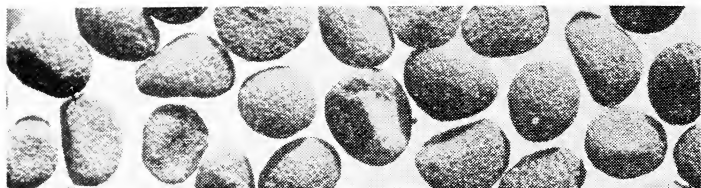
*Wild Carrot seed under the microscope*

**COCKLE.** An annual found chiefly in wheat or other grain. It is brought into these fields by sowing grain which has not been properly cleaned and remains to infest the following seed or hay crops.



*Cockle seed under the microscope*

**DODDER.** Parasitical plants that attach to and live upon clovers and alfalfa. Seeds about the size of alsike, yellow-brown in color, pebbly surfaced, somewhat spherical in shape often with two flattened surfaces. The plant grows from seed only.



*Dodder seed under the microscope*

CANADA THISTLE. Found in timothy, alfalfa, clover, Canada blue grass and small grain. This perennial usually grows in patches and is considered the worst weed in many northern states.

Can be eradicated best during drought. All plants must be destroyed, a good plan being to starve the underground parts by keeping down the top growth. A good method of eradicating it is to use alfalfa as described on page 38.



*Canada Thistle seed under the microscope*

We are indebted to Mr. A. A. Hansen of the Indiana State Experiment Station for the photographs of the five noxious weeds shown above.



## Soybeans

Soybeans are just now beginning to take the place in agriculture which they rightfully deserve. They can be grown wherever corn can be grown; they provide good forage, and at the same time improve the soil. They will grow on soil too acid for clover and fit readily into any crop rotation.

### *Why Grow Soybeans*

The production of Soybeans should be increased both for the crop itself and for its effect upon the soil. This crop furnishes an excellent quality of feed as either grain, hay or green forage.

The protein content of the feed will be especially high if the seed has been properly inoculated. The plants are hardy, drought resistant, and not much subject to disease or insect injury.

### *Their Use*

Soybeans require from ninety to one hundred and fifty days to mature, depending upon the variety. Some of these will mature as far north as New York, but, because the plant originated in a warm climate, others will not ripen except in the south. Authorities recommend that Soybeans have a permanent place in rotation, as in this way a legume can be raised continuously. For example, corn and Soybeans could be planted together, then Soybeans alone either for hay or grain, followed the next year with wheat and clover. If inoculated, an average crop of beans will store up as much as one hundred and twenty-five pounds of nitrogen per acre.

## Growing the Crop

There are several different methods of planting Soybeans, the method used depending somewhat upon the use to be made of the crop. Unsatisfactory results are very often due to the use of the wrong variety for the purpose intended. Very early beans should not be



planted for hay and silage nor should late beans be planted for seed production. It is highly important, then, that seed should be procured from a seedsman who is thoroughly familiar with the different varieties. Since we have handled and studied Soybeans for so many years we feel well qualified to suggest the proper variety to fit your needs. It is also well to guard against the presence of wild morning glory in the seed. Many beans, too, are put on the market before they are well cured so that the germination is apt to be low. A wise precaution is to plant Scott's Soybeans.

*Climate  
and  
Soil*

This legume is well adapted to both the corn and cotton belts. In the southern part of the corn belt the larger and later varieties, which give yields that make their cultivation profitable, can be grown. In the central section medium early varieties are grown successfully for forage and ensilage purposes and the earlier kinds for the production of seed.

Soybeans will succeed on nearly all types of soil. They will do better than any other legume on soils that are acid or of low fertility. In general the soil requirements are about the same as those of corn, provided bacteria are present or the seed inoculated.

*Planting*

The seed bed for planting Soybeans should be the same as is prepared for corn, and, like corn, they will respond to any extra soil preparation. The ground should be cultivated at intervals, for Soybean plants are easily crowded out by a rank growth of weeds.

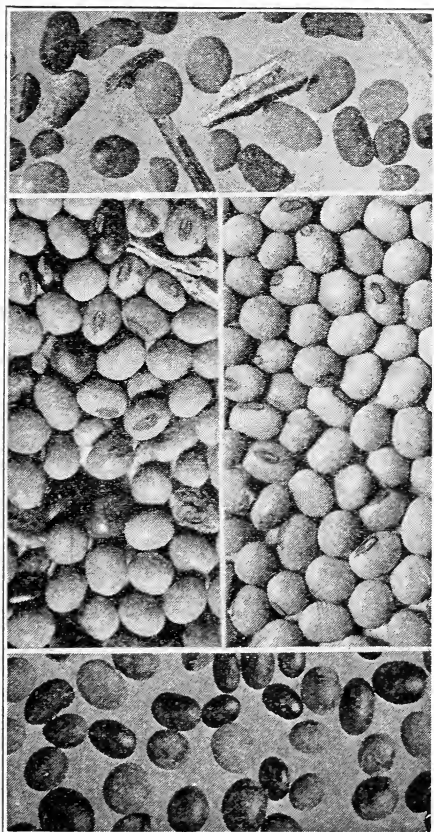
They may be planted any time after all danger of frost is past and the ground is warm. Common practice seems to be to seed a few days after corn planting time, the advantage being that before seeding the ground can be given an extra cultivation to kill weeds. If the plan is to raise a seed crop, planting should be done as early as possible, but for hay or green manure





even into August is not too late. The variety used makes some difference. Seed should be planted not over one to one and one-half inches deep, depending upon the type of soil. Poor stands sometimes result from too deep planting.

Well selected seed is necessary for best results in growing Soybeans. A chipped or cracked seed is unsafe, broken and split beans produce nothing but are a loss, as they prevent a full seeding. Worst of all is the presence of weed seeds.



The illustration to the left shows the difference in quality of home cleaned and re-cleaned seed.

Left center — a typical sample of low grade seed.

Right center — the same seed after it had been re-cleaned.

Upper — weed seeds, trash, split, cracked and rotted seed from sample.

Lower — impure seed (7 varieties) from sample.

*Photo courtesy  
University of Illinois  
Agricultural  
Experiment Station*



We have the most improved machinery for cleaning Soybeans and believe that we are furnishing better beans than can be gotten most places. Scott's Soybeans are free from wild morning glory and other noxious weeds, and are always of good germination.

## Methods of Seeding

### *For Hay and Pasture*

Drilling Soybean seed solid has proven to be the most practical method of seeding for hay, pasture, silage or green manure. The exception to this rule is on weedy ground when a rotary hoe will not be available for cultivation. Planted in this way the forage will be of finer quality and there will be an intensified use of atmospheric nitrogen. The usual quantity sown is  $1\frac{1}{2}$  to 2 bushels per acre, depending somewhat upon the size of the seed.

### *For Seed*

The usual method of planting for seed production is in rows so the beans can be cultivated. The weeds can be kept down and the seed will generally mature a larger size and better quality. A grain, beet, or bean drill can be used by covering up part of the holes. Formerly about 15 to 25 pounds of seed was sown to the acre, but now the larger producers find that it repays them to sow 45 to 60 pounds. The rows should be from 18 to 32 inches apart, depending upon your equipment for planting and cultivating, and the beans should be not over one to one and one-half inches apart in the rows. Rows twenty-four inches apart is a good average distance. Some growers recommend solid planting for seed. This is satisfactory if the ground is not weedy and a rotary hoe is available. This method takes more seed but less cultivation. About 90 to 120 pounds should be sown per acre.

Legume

Inoculation

Pays



It is possible to maintain the nitrogen-fertility of soils in three ways, namely, (a) buying nitrogen in the form of feed for livestock and adding the manure to the soils, (b) buying nitrogen in the form of commercial fertilizers, and (c) *growing inoculated legume crops*.

*Cheaper  
Nitrogen*

These first two methods are *expensive*, but the last one is used by those who produce nitrogen *inexpensively* by locating nitrogen factories on their own farms. They co-operate with nature and supply the proper soil bacteria, by inoculating their legume seed, which causes the production of nitrogen-gathering root nodules.

*Value of  
Nitrogen*

Inoculated legumes are enabled to take nitrogen from the air, where it occurs in unlimited quantities. This nitrogen, furnished by inoculation, has a most desirable effect upon the crops in many ways. It will: increase the yields; improve the quality of the feed; build up the soil and have a beneficial effect upon succeeding crops.

These results of inoculation are not guesses or theories, but actual facts worked out by demonstration and practice. The various State Agricultural Ex-

# TO INOCULATE ALL

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periment Stations and the U. S. D. A. have all proven the value of inoculation. Some of their results are reprinted here in brief form.

## *Increased Yields*

Why does inoculation increase yields? An inoculated plant is not limited to the use of soil nitrogen only, as it gathers nitrogen from the air, which enables it to make a full growth. The Illinois Experiment Station found that a 50% increase in the yield of soybean hay and grain (because of inoculation) was not at all unusual. The hay yield of alfalfa was increased 1151.4 pounds per acre, or 67.1% at the University of Wisconsin.

## *More Protein*

This nitrogen taken from the air also improves the quality of the crop, by increasing the amount of protein in the plants. The feed value is, of course, greater because of this and makes inoculation worthwhile even though larger yields may not be secured. At the Michigan station the following conclusion was drawn from their experiments on feeding value. "It has been learned that while nodules on the roots may not, on fairly fertile soil, notably increase the yield, they do increase the relative and absolute amount of protein in the plants. This increase is very pronounced and pos-



itive." Feeding legume grain, such as soybeans, will eliminate the necessity of buying high priced concentrated stock feed, especially if the plants had been inoculated, as then the protein content will be very large.

## *Soil Builders*

Authorities agree that inoculated legumes are real soil builders, while uninoculated legumes, are really soil robbers. Legumes need a large amount of nitrogen for their growth and take it all from the soil, rather than from the air, if not inoculated. The activities of the nodule organisms bring about a fixation of nitrogen which is available for future crops. It is also recognized, according to the Illinois station that the root nodules may influence the nitrogen content of the soil indirectly by creating favorable conditions for the activity of other nitrogen gathering bacteria. For this reason the true worth of inoculation cannot be measured alone by the amount of nitrogen added directly to the soil.

## *Pays Dividends*

An investment of twenty-five to fifty cents per acre is all that is necessary to inoculate legume seed with Scott's Guaranteed Bacteria. This investment is sure to pay a dividend several times over the



initial outlay. The cost of treating alfalfa, red clover, sweet clover, and like seeds is so small that one extra forkfull of hay from each acre will repay the inoculating expense.

*Scott's  
Bacteria  
Better*

Various groups of legumes will cross inoculate, that is the bacteria of one kind will inoculate some, but not all, of the other legumes. Scott's Guaranteed Bacteria is carefully prepared so that the proper cultures are furnished for the seed to be treated, and also so that these cultures are pure and not mixed with other kinds. Besides this, the best strains are supplied, as it has been proven that some strains will give better inoculation than others. Scott's Bacteria is guaranteed to be suitable in every respect. If nodules are not produced or it proves unsatisfactory in any way, we will cheerfully replace the bacteria or refund the purchase price.

**O. M. Scott & Sons Company**

Manufacturers

MARYSVILLE,       :       OHIO



# O. M. Scott & Sons Company

FIELD SEEDS SINCE 1870

Marysville, Ohio

February 1st, 1929.

Mr. Sower of  
Scott's Seed.

Dear Sir:

Scott's Seed Guide is here again, revised in many ways with new information about Soybeans, Sweet Clover, Alfalfa, etc. Even though you may have read all previous issues, we believe you'll find enough new facts to justify reading this 1929 Guide. Why not do it tonight?

Careful selection of field seeds is even more important this year than last. Unfavorable weather for the production of good seed has been the rule for several years and was especially the case in 1928. Real good seed is hard to find, and because of this much poor seed will be sold this year. It seems impossible for some distributors to get good seed, either because they do not know how to secure it, or because they buy whatever is offered them. Then too, many of them do not have the proper equipment for recleaning seed or have no desire to do so.

Because of this we feel Scott's Seed is the safest to sow all the time. We always exercise the same care in the selection of seed and have the latest and best equipment for recleaning it. By sowing Scott's Seed exclusively you will be certain of not sowing weeds on your farm or wasting money and labor in broadcasting a lot of worthless chaff.

On the back of this letter are the present prices on Scott's Seeds and we advise ordering now as prices may be higher later in the season. We wish every transaction to satisfy you and if at any time this is not the case, we shall surely try to make it right with you. Remember—

Freight is paid on 300 pounds. (See Guide p. 75.)

Prompt shipment of orders guaranteed.

Safe delivery of seed also guaranteed.

For your convenience in ordering a return envelope is enclosed which can be mailed without a stamp. Why not use it and get the order mailed today?

Yours very truly,

O. M. SCOTT & SONS CO.





A Marvelous Field of Soybeans, Profitable on Any Farm

## Free Offer is Made On Scott's Bacteria

FIFTY-CENT CAN IS GIVEN WITH  
EVERY \$5.00 PURCHASE.

As a special inducement to those who do not yet know the profit that comes from the use of Scott's Bacteria and to encourage present users to inoculate their legumes more freely we announce this special offer to apply for the 1929 season:

With each order for \$5.00 worth of Scott's Bacteria we will include one 50c can absolutely free. If you order \$10.00 worth you will receive a \$1.00 can free; with a \$15.00 order you will be entitled to \$1.50 worth of free Bacteria. It makes no difference what legume you wish to inoculate. For instance if you are planning to spend \$5.00 on Soybean Bacteria you may have the free can in Clover, Alfalfa, or Vetch inoculation or any other kind we list which includes Garden Pea and Bean Bacteria. Split the order up any way you wish but don't fail to take advantage of this liberal offer.

When you accept the above offer please write in your letter or on the order blank FREE BACTERIA 50c, \$1.00 or whatever amount you have coming. Be sure to indicate the variety of seed you wish to inoculate.

Every shipment of Scott's Bacteria is guaranteed to produce nodules.

Each year there are about 10,000 copies of Scott's Seed Guide reviewed in the class room.

## Will You Broadcast for Us?

We don't pretend to be big enough and prosperous enough to have a radio station of our own. But occasionally we use the services of WAIU in telling about a new edition of some booklet or bulletin. The Seed Guide you are now reading will be announced to the farming populace on the air. You may have a friend who won't hear it. Why not broadcast the word to him for us? Any man who has even a bushel of seed to buy can buy it more intelligently and with greater profit to himself by having first read Scott's Seed Guide for 1929.

## Commerce Head Sows Scott's Seed

The new United States Secretary of Commerce, selected by President Coolidge to finish the unexpired term of Herbert Hoover, has for years been a user of Scott's Seed. We refer to W. F. Whiting of Holyoke, Mass. Mr. Whiting not only farms but he farms well. Several years ago representatives from the Massachusetts Experiment Station made an extensive tour to select the cleanest fields of various crops. On the farm of Mr. Whiting they discovered a field of Mammoth Clover which surpassed any other found in New England. The stand was thick and there simply were no weeds. The seed for that field came from O. M. Scott & Sons Company. It is no wonder Mr. Whiting favors us with the order for his annual seed wants.

## Pure Seed is Still the Biggest Value

EVERY SEED BUYER SHOULD  
LEARN "HOW TO KNOW  
GOOD SEED."

There is always a tendency during seasons of unfavorable operations to buy cheap things and to get along with small expenditures regardless of any other considerations. In other words if a bushel of clover seed can be bought for \$15.00 why pay \$21.00? There could be only one reason for paying the longer price and that of course would be to get seed which was \$6.00 per bushel better. To do that would be comparatively easy. Between seed testing 99½% and seed testing 98% it would be possible to prove a value difference of \$6.00 per bushel because of a vastly larger percentage of noxious weed seeds in the inferior lot and a greater number of shriveled, immature grains. If you find 1% weeds in a certain lot of seed that is quoted at \$15.00 per bushel you are paying only 15c for the weed seeds but they may do \$50.00 worth of damage to the crop. They may not only infest your fields and adulterate the crop but weeds check the growth of the plants you are attempting to grow and cut down the yield accordingly.

Test Before You Invest.

When you are tempted to buy a cheap lot of seed first find out all you can about it. Spread the sample out on a piece of white paper as we suggest in "How to Know Good Seed." Find just how much waste matter is present and how many weeds. Think seriously before you consent to sow filth on your fields. Choose rather to sow less seed of a superior quality. Put on just 1 or 2 pounds per acre less of the seed which you find to be of the highest purity and the chances are you will save money all along the line.

## Preserve Your Copy

"I always keep mine each year until I get a new one. Always hang it up where I can refer to it whenever I wish." Wm. C. Farrington of Belleville, Ohio, preserves Scott's Seed Guide until the year ends, which is an excellent plan. It is as a reference book that you will find this annual publication most valuable. **Preserve your copy.**

## Old Guide Still Valuable

"Your Seed Guides of 1925 and 1926 are still in our desk and have been used a number of times in reference to our problems. Your 1928 Guide is even better and we appreciate it." George B. Jackson and Son, Fort Ritner, Indiana, who wrote the above, will find our 1929 Guide of still greater value.

## VELVET BARLEY

Velvet Barley is a much larger producer than beardless barley, is much easier to harvest and is more satisfactory in every way." So writes the Wisconsin Experiment Station. Beardless and hulless barleys are small yielders. Velvet yields as heavily as the varieties with beards. We have a limited supply of this seed and hope in another year to be able to offer it to our trade very freely. You will find it reasonably priced.

## ENOUGH BUCKHORN TO SOW TEN ACRES

WE CLEANED IT OUT OF COUNTRY-RUN CLOVER.

The filth which cleans out of seed presents the best argument for the necessity of thorough recleaning. Not long ago we did a custom job of cleaning and had a full cotton bag of buckhorn seed. There was scarcely another kind of seed in the sack. That sack full would have sowed 10 acres at the usual rate of sowing seed. What would you give for the harvest? Thousands of bushels of seed are sowed every year which the cleaner never touches yet most weeds can be removed by screeuing, blowing, or the gravity process. Our machinery for recleaning to remove the maximum amount of waste matter and weeds is up-to-date in every respect. Scott's Seed goes through a process which takes out of country run seed the filth that may mean the difference between profit and loss to the purchaser. This seed is worth to you—the original cost, plus the loss in bulk from recleaning, the small labor expense involved. That is exactly the price you pay when you buy Scott's Seed. Harvest time will prove the wisdom of your choice if you sow it.

## A NEW LINE OF SEED DISINFECTANTS

DU PONT AND BAYER UNITE ON  
SEMESAN LINE.

Owing to the uniting of the Seed Disinfectant Divisions of The Bayer Company and E. I. du Pont de Nemours & Company products are being offered by the new corporation under the trade name of DU BAY. The names given the several Dust Disinfectants and their respective prices are as follows:

**CRESAN**—Disinfectant for Wheat, Oats, Barley and other cereals—8 oz. tin 50c; 1 lb. tin 75c; 5 lb. tin \$3.00; 25 lb. pail \$12.50, etc.

**SEMESAN**—Disinfectant for vegetables, Flower Seeds and Bulbs—2 oz. tin 50c; 1 lb. tin \$2.75; 5 lb. tin \$13.00; 25 lb. pail \$56.25, etc.

**SEMESAN JR.**—Disinfectant for Seed Corn—4 oz. tin 50c; 1 lb. tin \$1.75; 5 lb. tin \$8.00; 25 lb. pail \$31.25; 100 lb. drum \$120.00, etc.

**SEMESAN BEL**—An instantaneous Dip Disinfectant for Seed Potatoes—4 oz. tin 50c; 1 lb. tin \$1.75; 5 lb. tin \$8.00; 25 lb. pail \$31.25; 100 lb. drum \$120.00, etc.

Watch the Ohio Farmer and other farm papers for full page advertisements of this most widely accepted disinfectant. If you have used Dip Dust in the past, buy the above products now since the Bayer and du Pont Companies have joined hands and are making the one line of disinfectants. For the convenience of our customers we have accepted the appointment as one of the principal distributors of DU BAY products. Order your seed disinfectants right along with Scott's Seed and have them delivered in the same bags and at prepaid prices. Or if ordered separately we can ship by express or freight with prices f. o. b. Marysville.

## Why Take a Chance?

"We have been sowing your seeds for many years and are always sorry when we make a change for a season." Howard E. Smith, Parkman, Ohio. The solution to that problem is easy, Mr. Smith; just don't take any more chances. If you find yourself in urgent need of seed, wire the order and we'll make shipment the same day. Even a delay of two or three days in sowing is better than risking a quality in which you do not have perfect confidence.

## Many Seeds Below Normal in Price Can be Bought Profitably

PREDICTED ADVANCES HAVE OCCURED

Seed that is below the average of a five or ten year period in price is apt to be a good buy. In our advance folder of prices issued December 1st we called attention to several varieties which seemed to us exceptional values. They have all proven to be so. In some instances there have been only small advances but in Soybeans particularly our predictions have proven accurate.

The early outlook was for a bumper crop of Soys. We looked for a price to growers which would disappoint them. But in certain sections the weather at harvest time was bad. Threshing came at an unfavorable period and the turn-out fell far below early estimates. On the other hand there were many anxious buyers. Soybeans have become immensely popular and there are thousands who refuse to be without them. Not only the dairyman but the general farmer can use beans most profitably. Since supply and demand make the price there was nothing else for beans to do but advance and they did. Nevertheless they are an excellent buy now, for the scarcity at seeding time will be still more noticeable. Buy your beans now, is our advice.

## VALUABLE ADDITIONS TO SCOTT'S SEED GUIDE

YOU WILL BE REPAID FOR READING FROM COVER TO COVER.

Under the section on Weeds some interesting illustrations are to be found in Scott's 1929 Seed Guide. Those who read it clear through will profit most. We urge all our friends to devote an evening to the careful reading of this book. The time will be spent most profitably.

Note in the Soybean section why it pays to plant beans that have been thoroughly cleaned. Read also what is said about the value of planting Soybeans and corn together.

There is new data on Alfalfa in this year's Guide. Read about the experiments that have been conducted in the cutting of two instead of three crops.

In the Sweet Clover section you will find an illustration showing to what depth the roots go the first year. And then in the Bacteria section you will find a Soybean plant with a heavy nodule formation on it. A field of such plants means a tremendous profit wherever you put it.

We shall be glad to receive any comment you care to make about Scott's Seed Guide. Tell us if it proves helpful to you and don't hesitate to suggest ways in which we can make the next edition even more valuable.

**SWEET CLOVER** is also good property at present prices. Think of buying the seed of a popular clover at less than one-third the price of Red! It is no longer necessary to set forth the respective merits of Sweet Clover. They are generally recognized. This year you can put in a field of it at a mighty small seeding cost.

**HAIRY VETCH** is being successfully seeded in the spring. Heretofore it was largely used as a cover crop. Vetch is a legume, makes splendid hay and cattle like it. Anywhere from 15 to 25 pounds per acre may be sowed. At one time, not many years ago, vetch was selling for over 30c per pound. Look at the price now! While most vetch is imported we have been able to secure a large supply of native seed which you will find of very nice quality.

**ORCHARD GRASS**, still a good buy and **TIMOTHY**, reasonable indeed as compared with other seeds, are other below normals.

## Pleased With Seed Guide

"I am in receipt of your Seed Guide and am highly pleased with it. Two years ago I placed a previous edition in my Farm Library. This Bank handed out a number of copies of the same issue to its patrons and we have every reason to believe they did much good to the recipients." Charles E. Palmer, Bank of Noble, Noble, Illinois, thus expressed his approval of Scott's Seed Guide. We always have extra copies available for those who can put them to a similar use.

Feb. 1, 1929

**Freight is Paid** on orders for 300 pounds to stations in Ohio, Penna., W. Va., N. Y., Ky., Va., Md., D. C., N. J., Del., Mich., Ind., Ill. (See Guide p. 75.) **and Safe Delivery** of your order is guaranteed

Red (Home Grown) . . . . .	\$20.80 bu.
Red (French) . . . . .	15.30 bu.
Mammoth . . . . .	21.30 bu.
Alsike . . . . .	22.50 bu.
White Sweet . . . . .	6.60 bu.
Yellow Sweet . . . . .	6.60 bu.
Grundy Co. Sweet . . . . .	7.50 bu.
Hubam . . . . .	.30 lb.
Crimson . . . . .	8.50 bu.
White Dutch . . . . .	.40 lb.
Lespedeza (Japan) . . . . .	.23 lb.
Lespedeza (Korean) . . . . .	.50 lb.

Kansas	\$16.80 bu.
Idaho	17.80 bu.
Grimm	29.50 bu.

Timothy .....	\$3.35 bu.
Hairy Vetch .....	.12 lb.
Spring Vetch .....	.08 lb.
D. E. Rape (Holland) .....	.10 lb.

60-Day, Scottish Chief, and Siberian .....	\$ .90 bu.
Miami .....	.95 bu.

Mixed	\$2.35 bu.
Manchu	2.50 bu.
Ito San	2.75 bu.
Mansoy	2.75 bu.
Dunfield	2.75 bu.
Ebony	3.00 bu.
Midwest	3.00 bu.
Wilson	3.25 bu.
Virginia	3.25 bu.
Mammoth Yellow	3.25 bu.
Illini	3.25 bu.
Sable (same as Peking)	3.40 bu.
Canada Field Peas	3.75 bu.

Kentucky Blue Grass.....	\$ .32 lb.
Canada Blue Grass.....	.25 lb.
Redtop .....	.17 lb.
Orchard Grass .....	.18 lb.
Rye Grass .....	.12 lb.
Meadow Fescue .....	.18 lb.
Pasture Mixture .....	.22 lb.
Sudan Grass .....	.09 lb.
Scott's Lawn Seed .....	.55 lb.

Little Cob Yellow Dent, Little Clamage, Improved Clamage, Woodburn, Leaming, Reid's Yellow Dent, McGinnis, and Blue	\$4.00 bu.
For Ensilage: Blue Ridge, Eureka and Red Cob	4.00 bu.
Spring Wheat	2.25 bu.
Velvet Barley	1.50 bu.
Bearded Barley	1.25 bu.
Buckwheat	1.75 bu.
German Millet (Western)	2.50 bu.
German Millet (Tennessee)	3.00 bu.
Hungarian Millet	2.80 bu.
Amber Cane	2.75 bu.

For 60 lbs. all legumes except Soybeans .....	\$1.00 can
For 30 lbs. above .....	.50 can
For 5 bu. Alfalfa or Sweet Clover .....	3.50 can
For 60 lbs. Soybeans .....	.50 can
For 5 bu. Soybeans .....	2.00 can
New Cotton Bags .....	35c each
Patched Cotton Bags .....	25c each
Burlap Bags .....	15c each

→ (If you wish to keep this Price List, tear off here) ←

The above prices are for more than 10 pounds. Five to 10 pounds, add 2c per pound; less than 5 pounds, add 5c per pound.

✻   ✻   ✻

**ABOUT BAGS.** Patched cotton bags are safe for clover and timothy seed. Soybeans and grain can be shipped in burlaps weighed in but not charged. New cotton bags are sold below cost to us and are not an addition to the cost of Scott's Seed. Send your own bags if you wish but please say in your order "Am sending bags."

✱ ✱ ✱

It is not possible to put three bushels in a bag. A bag not quite full is less likely to be damaged.

✦ ✦ ✦

If extra bags are needed we take out seed to offset the cost.

✱ ✱ ✱

**TERMS.** We will ask you to kindly include full remittance with your order. A money order, draft, or your personal check is acceptable.

✱   ✱   ✱

**PARCEL POST.** If you wish shipment by mail, kindly add to your remittance to cover postage. See page 73 in the Seed Guide.

Please  
Do not  
Write  
Here

AMOUNT.....

COUNTY.....

KEY.....

ENTER.....

No. ....

Name.....

Address.....

County.....State.....

Ship by..... (We ship by freight unless otherwise specified.)

Ship to..... County.....

(If different from P. O.)

Amount Enclosed \$..... Date.....

Quantity	ITEMS	Price	Total
	Cans Bacteria for		
	Cans Bacteria for		
	Bags		

0

TOTAL AMOUNT \$.....

Postage  
Will be Paid  
by  
Addressee

No  
Postage  
Neces  
If Mailed  
Jan. 1,

**BUSINESS REPLY ENVELOPE**

FIRST CLASS PERMIT No. 1, Sec. 384½, P. L. & R.      MARYSVILLE, OHIO

**O. M. SCOTT & SONS Co.**  
**FIELD SEED**

**MARYSVILLE, OHIO**





*With  
Corn* The practice of planting corn and Soybeans together is becoming quite general. They can be planted at the same time by using a bean attachment on the corn planter. If necessary the beans can be planted after the corn, by carefully retracing the rows and planting not over one inch deep. The corn is drilled at the usual rate and the beans at about six to eight pounds per acre.

Soybeans may be mixed with cowpeas, sorghum or sudan to make a balanced forage. Ten pounds of sudan or sorghum mixed with three pecks of Soybeans makes a good hay.



*Using a rotary hoe in young soybeans. This implement is especially useful in the cultivation of soybeans and can be utilized to real advantage by more farmers.*



## Cultivation

In case a heavy crust forms before the beans are out of the ground, it is well to break this crust so the plants won't "break their necks" in coming through. A spike harrow or rotary hoe does this job well.

Beans seeded in rows are commonly cultivated with corn machinery, those seeded solid are best cultivated with a rotary hoe. This work should be done during the heat of the day when the plants are dry and tough, as they are tender when wet. Those seeded in rows should be cultivated from about the time they are 3 inches high until they are ready to bloom. Three or four cultivations are usually sufficient. Solid seedings can be cultivated while the plants are from 3 to 8 inches high, or until the plants make enough shade to discourage weed growth. A weeder or harrow is sometimes used instead of the rotary hoe.

## Utilization

*Pasturage* Soybeans make an ideal green pasture during August and September when most other pasture crops are dry and undesirable. Stock may be turned in when pods are formed and the foliage still abundant and green. With hogs pastured in this way and having a part ration of corn, too, an increase of 400 pounds pork per acre may be expected for the Soybeans alone. Sheep or lambs do especially well, as they will show a gain of approximately 350 to 500 pounds of meat per acre, and will clean up the beans, and weeds ideally for fall seeding of wheat or rye.

Plowing under a crop for soil improvement is a good plan seldom followed. About the same results can be gotten by pasturing the crop and then plowing or disk-





ing the land. The plant residues and manure are retained on the ground and at the same time a nice profit is taken off in the stock fed.



*Soybeans with corn. Think of the tremendous amount of balanced feed contained in an acre of these companion crops.*

### *Soybeans and Corn*

Some contend that the Soybeans reduce the corn crop if the two are planted together. This is not objectionable (even if it is true), as the purpose is to raise the maximum amount of balanced ration feed rather than a large yield of grain.

Swine and sheep can be turned into this crop about September 1st. Lambs, or pigs up to 50 or 60 pounds, will eat the beans without damaging the corn, thereby making it possible to harvest the corn later if it is so desired. If the entire crop is to be pas-



tured, sheep or hogs of any size may be turned in. The stock will take on fat and improve in general condition wonderfully. Beans are so rich in protein that it is not necessary to feed tankage or any other protein concentrate with them.

Unless weeds are apt to bother, it is well to plant Soybeans in all corn fields when possible to utilize them. Among the chief problems of the farm is the economical harvesting of the corn crop and the return of manure to the land with the least possible loss or waste. Harvesting well balanced companion crops of corn and beans the livestock way solves both of these problems at once.

*For  
Silage*

As an ensilage crop, in combination with corn, Soybeans have been used for years. A silage consisting of three parts corn and one part Soybeans keeps well, is readily eaten by stock, and the animals show good gains in flesh and milk production. The beans contain 145% more digestible protein and 40% more fat than the corn silage. It is important that a variety of Soybeans should be selected that not only makes a maximum growth of vine, but also develops beans by the time the corn is ready for the silo. If the beans are grown in separate fields, three loads of corn run through the cutter, followed by a load of Soybeans, makes a well-balanced feed. Beans that are to be put into a silo can be allowed to ripen more than when used for hay, as they will go into the silo without curing, and the juice of the corn will soften the stems. Harvesting is done with a binder, just as corn alone would be harvested. The portions of plants left in the field can be pastured after harvesting. Hogs will pick up the shattered seed.

The addition of Soybeans to the silage makes the purchase of oilmeal and tankage unnecessary and the silage greatly increases the flow of milk.

*For  
Hay*

“The Soybean shows up well as a hay crop. It is probably for this use more than any other that it is appreciated. It is capable of producing satisfactory yields of a highly nitrogenous hay which is the equal, pound for pound of feed consumed, of alfalfa hay.” The above is quoted from a recent bulletin published by the Illinois Experiment Station. This bulletin states further that feeding trials at Illinois, Indiana, Iowa, Maryland, Mississippi, Missouri, Ohio and South Dakota Experiment Stations, bear out this statement.

Soybean hay is almost uniformly good for all classes of livestock. It is equal to red clover, alfalfa and cowpea hay in milk and butter production.

“Grow Soybeans” is the answer to the yearly problem of stockmen as to how to produce more legume hay. They will fit into any rotation. When clovers have winter-killed or failed to catch, Soybeans make the best crop to furnish legume hay and prevent a break in the rotation.

The best variety of Soybeans for making hay is one that is tall and has slender stems. The low growing kinds bear leaves and pods too close to the ground for entirely satisfactory harvesting. The Wilson and Virginia varieties are probably the most desirable in the central states and generally produce the most abundant hay. On clay ground the Virginia does especially well. The best earlier hay varieties are Manchu, Midwest, and Mansoy.

Time for making hay will be determined by weather conditions, the press of other farm work and the variety of beans. The early varieties can be cut usually before the first of September and so the work will be out of the way by corn harvest and silo filling time.

The Soybean may be cut for hay at any time from the setting of the seed until the leaves begin to turn yellow. It is most suitable for hay, however, when the



Pods are well-formed, for at this stage of growth the largest yield and the best quality of hay will be obtained. If the crop is cut earlier, the percentage of protein will be higher, but the total yield will not be so large and the difficulty of curing much greater. If the cutting is delayed, however, the stems become more fibrous and decline in feeding value, and if left too long, much loss in leaves will occur.

Soybeans are usually cut with a mower and left on the ground until wilted. Then they may be raked into windrows and allowed to complete curing. Sometimes the hay is mowed direct from the windrows. In rainy seasons it must be placed in tall, loose cocks for a week or ten days. This should be done while the plants are damp from dew, as they will be more tough and the leaves will not shatter as much. Rain generally does not hurt the quality of the hay except to discolor it.

*Feeding  
the  
Grain*

Experimental work and practice has demonstrated the great value of feeding the Soybean seed. This can be fed either in the form of whole beans or after they have been ground. The big advantage of using them is that farmers can produce all the necessary dairy feed on their own farms.

The Indiana Experiment Station found that ground Soybeans were worth 20% more than linseed oil meal.

This station also found that when whole Soybeans were fed to lambs they gained 29 pounds as against 25 pounds when fed cotton seed meal, as a supplement to corn. Again, results showed that a pound of Soybeans, when fed to spring pigs, replaced a pound of tankage. Their conclusion is, "since Soybeans can be produced on the majority of farms for less than the usual cost of an equal weight of tankage, they should be more generally used with corn and legume pasture for fattening hogs."



## SCOTT'S SEED GUIDE

### *For Seed*

The seed cures to best advantage on the stalk, so beans should not be cut until absolutely necessary to prevent loss from shattering. A good guide is to wait until the pods are fully formed and the seed in the hard dough stage.

By this time most of the leaves will have fallen off. The grain binder is generally used, but sometimes it is necessary to use a mower if the stalks are short or badly lodged.

If the beans are not allowed to get thoroughly ripened—some varieties must be cut early or too many beans will be lost—they should be put in cocks until well cured, otherwise the seed may be damaged when stored in bins or sacks. Four or five weeks time should see the seed entirely cured.

For the large grower the most satisfactory method of handling is to use the combine. This method saves seed and labor and minimizes weather risks.

### *Threshing*

An ordinary grain separator will do a good job of threshing by using a blank or board instead of the regular concaves.

The speed of the machine must be cut down so as to avoid splitting the bean. Special bean separators can be purchased at reasonable prices. Corn shredders are sometimes used for threshing beans. The only change necessary is to loosen the snapping rolls and raise the back part of the shredder about four inches. Feed slowly about one load of beans per hour and keep the screens clean. While this operation is slower than using a separator, practically no beans will be cracked.

### *Inoculation*

In common with most other legumes, Soybeans are able to utilize the nitrogen of the air through the plants. The presence of these organisms is indicated by the development of nodules on the roots. In 99 cases out of 100 if the seed is not inoculated, no nodules will



develop. While the beans which have not been inoculated may grow as well as the inoculated bean, they will do so at the expense of the soil, and therefore will not build up the soil like the roots filled with large nodules. Also, there is no doubt that when Soybeans are inoculated the protein content of the plant is greater.

A special price on Scott's Bacteria for Soybeans makes the cost of inoculation reasonable.

## Varieties

It is said that more than 2,000 varieties of Soybeans have been studied and described in the United States. Of this list only a few have shown any real agricultural value. In the following pages we are describing the most popular varieties and those which our experience has proved best suited for the purpose intended. The number of days for ripening of beans will vary somewhat with the locality and weather conditions, also the time of seeding determines to a large extent the length of time it will take to mature the beans. Those seeded in early May will mature somewhat earlier than those seeded in June, but the difference of time of maturing will not be so great as the difference in planting dates.

## First and Second Choice

We attempt to furnish practically all varieties of Soybeans and will have a few not listed here, but inasmuch as so many beans are much alike, we suggest, especially later in the season, that in ordering, first and second choice be given.

## Yellows

ITO SAN. Once the best known early bean. Still popular in some sections. Matures in about 105 days.



## SCOTT'S SEED GUIDE

**MANCHU.** Introduced from Manchuria in 1911. Plants erect and well suited for "hogging off" with early corn. Is by far the most popular variety and has almost completely taken the place of other early kinds, such as Ito San, Early Brown and Black Eyebrow. Holds seed well. Production much below normal because of wet weather during harvest. 105 to 110 days.

**DUNFIELD.** Matures about the same time as Manchu. Suitable for hay or seed production, but has never become very popular. 105 days.

**MANSOY.** Selected from Manchu by United States Department of Agriculture, but matures ten days later than it. In many sections, although the seeds are larger, it is replacing Midwest, as a seed and hay bean.

**ILLINI.** A medium early seed type bean, that promises to become popular. 105 days.

**MIDWEST.** Introduced from China in 1901. Formerly called Hollybrook. Gives good results for hay or silage, but it is considered a little late for safe seed crops in the central states. Quite a short crop this season. 115 to 120 days.

**A K.** Plants erect and bushy. Good for hay or silage or "hogging off" with medium early corn. 110 days.

**MAMMOTH YELLOW.** Too late for the north. Matures in 145 days.

## Blacks

**WILSON.** Introduced from Manchuria in 1906. A special variety made from it by Dr. W. J. Morse in 1911. This variety has been in great demand since it was first offered by the Department of Agriculture. Probably the best known all-round variety for hay and silage. Stems are fine and it produces a large quantity of hay of the highest quality. 122 days.



EBONY. An excellent variety, but very scarce this year, because injured by frost. Seed supply limited. 120 days.

PEKING or SABLE. One of the best hog beans, but not in great demand and the seed is usually scarce, as it produces a limited amount per acre. 120 days.

## Browns

VIRGINIA. Each year we suggest some one bean that appears to us to be the best purchase. This time it is the Virginia. There was a larger production than usual, and although usually higher in price than the Wilson, we can now offer it at a lower price. It is the best hay bean for the heavier types of soils. Unexcelled for ensilage, for it grows tall and the vining tendrils cling to the corn. This year a good substitute for high priced cowpeas. About 125 days.

## Mixed Beans

The cheapest beans this year will be those that are mixed. These will be principally Manchu, containing a few black, and Manchu with about 25% A K. In limited quantities other mixed varieties will be available.

*Inoculate Soybeans with*  
**SCOTT'S GUARANTEED BACTERIA**





## Sweet Clover

One of the most outstanding accomplishments of the United States Department of Agriculture and the various State Agricultural Experiment Stations has been the introduction of Sweet Clover as a farm crop. Even though it was known in the United States as early as 1738, its real value was not appreciated to any extent until near the present century. In fact, it is said that the turning point in the agricultural history of Sweet Clover did not occur until the publication in 1912, by the Ohio Experiment Station, of a comprehensive bulletin on this subject.

In many sections this legume is now replacing and has replaced red clover because of red clover diseases, worn out soils, or other crop failure causes. Sweet Clover is almost entirely free from disease, and it will grow on practically any soil, provided lime is present.

Of the many varieties of Sweet Clover only a few have so far been shown to have any agricultural value. These are described as follows:

**WHITE SWEET CLOVER.** This, the most common variety, is a white blossomed biennial. It has a strong root development and a leafy growth much like alfalfa in appearance. During the first year it often grows over two feet in height and usually approaches five to eight feet during the second year. As its growing season is two or three weeks longer than the yellow, it produces a larger top growth and so is preferred for hay the first year. It is also better for pasture, as it gives more grazing days.

**YELLOW SWEET CLOVER.** This, a yellow blossomed biennial, produces a smaller growth than the white. Its stems are finer and more branching and so it makes better hay the second year. It matures



two weeks earlier and the seed is more easily harvested because of the smaller and shorter stems.

**GRUNDY COUNTY SWEET CLOVER.** This is a variety of the biennial white sweet which probably is raised chiefly because it is easy to secure good yields of seed from it. It resembles the yellow variety in this respect and also in that it should not be sown for hay the first year or pasture the second, because of a small top growth and early maturity.

*Why It Is  
Valuable*

Sweet Clover is probably our most valuable soil improvement crop. Its extensive root system enables it to gather the little plant food remaining in worn-out soils. As these succulent roots decompose they leave the soil more friable and mellow, so that following it a good crop, even of corn, may be raised, although no profitable crop could be grown on the same land before. The deep penetration of the long roots improves the drainage wonderfully. If properly inoculated, the plants will add considerable nitrogen to the soil.

Sweet Clover is extremely drought resistant and so furnishes pasturage during summer dry periods when other pasture plants fail. Then, too, this crop carries several times as much stock as ordinary pasture land, and worn-out pastures and meadows can be built up by it. As a universal plant it leads all others, for it will not only grow in any climate, but also on soils where alfalfa fails. It has the same nitrogen fixing bacteria as alfalfa and so prepares the way for the latter by thoroughly inoculating the soil and by improving the drainage. It prevents erosion and practically never freezes out during winter or spring. For many years bee keepers have recognized the value of this clover, as the honey from the flower is of good color and flavor.



*Notice the tremendous growth of this second year stand of Sweet Clover. A stand like this furnishes a large amount of good pasturage. Photo courtesy Farm Crops Extension Department, O. S. U.*

*Where It  
Will Grow*

Almost the only limiting factor to the growing of Sweet Clover is the absence of lime. Lime is as necessary for Sweet Clover as for alfalfa. Observation of Sweet Clover, in places where it grows naturally, indicates what is necessary to be sure of a good stand. Organic matter or humus seemingly is not present, but these spots contain lime and the ground is hard. This shows that a firm seed bed should be prepared and lime applied if the soil is acid. If the soil is sweet, this plant will grow in water-logged soils nearly as well as alsike and far better than alfalfa or red clover. Sweet Clover must be inoculated if good results are to be had, and the lack of this accounts for many failures. Even though it is sown in winter, the seed should be inoculated, as freezing weather will not injure the bacteria, nor will the sun's rays interfere because enough of the bacteria will stick to the under side when the seed is sown on top of the ground.

## Uses of Sweet Clover

As stated before, Sweet Clover is useful as a pasture, hay, or soil improvement crop. Probably no other crop grown on farms has any more real agricultural value.

### Pasture

It has been proven (by the University of Illinois Experiment Station) that Sweet Clover is capable of carrying as much or more live stock than any other kind of pasture. A five-year average of Sweet Clover pasture, available the fall of the first year with the total available the second year, gives 150 pasture days against 101 pasture days for good blue grass. Sweet Clover is very high in mineral content, especially of calcium and so is particularly valuable for dairy cattle and young stock and it always increases the milk flow.



## SCOTT'S SEED GUIDE

The white variety is best for pasture, as it stays green longer.

### *First Year Pasturage*

A common practice is to seed Sweet Clover in wheat or rye during winter or early spring or with early small spring grains. If weeds will not interfere, it can be sown alone in the spring on corn or other bare ground, without sowing a nurse crop. First year Sweet Clover will furnish an abundance of fall pasturage when other fields are furnishing very little feed. During the first year grazing can start when the plants are about six inches high and enough animals should be kept on it so that it does not get ahead of them, as then it tends to get coarse. If weeds are bad, sometimes Sweet Clover must be cut during August. If this is necessary, the cutter bar should be set quite high, for there is no further growth of the main shoot after it has been cut, and so dependence must be placed upon the lateral branches for pasturage or hay.

Mr. V. C. Batsdorf of Xenia, Ohio, uses Sweet Clover "for pasture, as it withstands winter-killing better than other clovers and makes an early spring pasture, and then the seed is cheaper."

### *Second Year Pasturage*

The second year, Sweet Clover makes a quick, early growth and may be pastured earlier than any other plant. If the pasture is grazed reasonably close, there will be a constant supply of small tender shoots, but should the plants become coarse, the field can be clipped to stimulate the growth of these shoots.

Even if a seed or a hay crop is wanted, pasturing may continue until the middle of June, as grazing really benefits the stand by causing the plants to stool and make a larger number of branches. If the stock is removed about two months before heavy frost, the Sweet Clover will reseed itself.



### *Renovating Old Pastures*

Old pastures are often successfully improved by disking in the fall and sowing a few pounds of Sweet Clover during the winter. Not only is the amount of pasturage increased, but the grasses will be improved, owing to the addition of humus and nitrogen furnished by the Sweet Clover. The same plan may be followed in the spring but not as successfully. At this time the seed should be drilled in.

### *Green Manure*

Many authorities believe that Sweet Clover is most useful as a soil improvement crop. If inoculated, the plants take nitrogen from the air, which is stored in the roots, stems and leaves. This is delivered by rapid decay after the crop has been turned under. One particular value of Sweet Clover is that it can be grown on land between small grain and corn and so the use of the land is not lost for a season, as is the case with so many soil improvement crops.

### *Nitrogen Supplier*

Why buy commercial nitrogen when Sweet Clover will take it from the air and pay you for doing it? At the Ohio State University Farm a four-year experiment showed that the least amount of nitrogen present in Sweet Clover May 1st of the second year was 120 pounds per acre. Furthermore, this nitrogen is available to the succeeding crops as rapidly as they can make use of it. But, Sweet Clover must be inoculated with its particular nitrogen gathering bacteria, for without this it cannot secure nitrogen from the air and will not make a thrifty growth. Another unusual ability of Sweet Clover is that it can get to and make use of the less available plant foods. These are gathered from the deep layers of the soil by the roots, and they then become available to the next crop when the plant is plowed under.

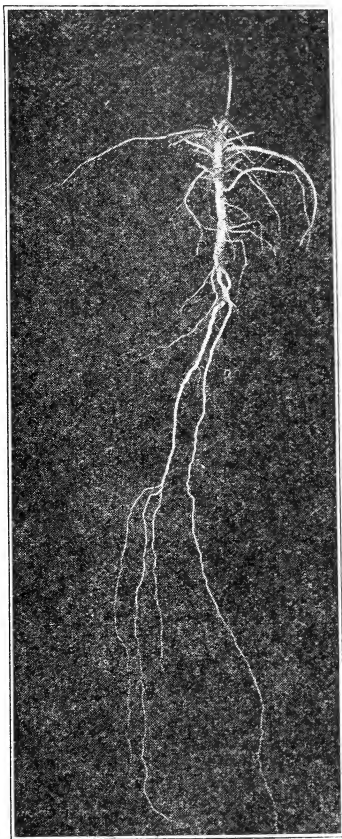
By this we see that Sweet Clover makes available, conserves and adds to the nitrogen of the soil.

***Improves  
Drainage***

Besides improving the soil chemically, Sweet Clover also improves it physically. The underground growth loosens the soil so that it plows more easily, and at the same time the humus is very beneficial. As the large roots decay, they leave open channels through the hard subsoil, and so the drainage is greatly improved. (See illustration to right). Growers have found that Sweet Clover will put soil in such a condition that drain tile, which previously proved inadequate because of the increasing compactness of the soil, will then be able to

***Plowing  
It Down***

keep the land free from water. Extensive experiments have shown that the best time to plow under a crop of Sweet Clover is between April 20th and May 10th of the second year. At this time—the plants are killed without difficulty,



*Root of White Clover sown April 20 and dug in November of the same year. This deep branching growth shows the value of Sweet Clover as a subsoiler. Photo courtesy Farm Crops Extension Department Ohio State University.*



a corn crop to follow can be planted early enough for maximum yields, and 80% of the greatest possible amount of nitrogen, which can be accumulated, is secured.

## Hay

The best Sweet Clover hay is made in the fall of the year sown. This hay will be the equal of alfalfa in composition, palatability and feeding value and usually is superior in protein content. It is cured about the same as alfalfa or red clover except that, being quite succulent, more time is required for drying.

"We grow Sweet Clover for hay with excellent results by sowing it in wheat fields in spring, and cutting it in August or September. Had a tremendous yield this year of very fine quality hay."

—Saucona Farms, No. 4, Bethlehem, Pa.

### *First Year Hay*

First year hay should be cut about the time growth ceases, which is usually in late September. Shortly before this time, numerous large buds are formed at the crown of the plant and these produce the next year's crop. After these are well formed the plants are ready for winter, and cutting of the year's growth will not kill them. It is not necessary to leave more than an ordinary stubble when cutting a hay crop in fall of the first year.

As in handling other clovers, the idea is to get rid of the water gradually instead of allowing the leaves and stems to be burned by the sun. This saves the leaves, the most valuable part of the plant. The hay should lie in the swath until well withered and then be raked into windrows. The next day, if sufficiently dry, it can be put into cocks and cured. The cocks should be of such size that they can be loaded in one forkful in order that as few leaves as possible be lost.





### *Second Year Hay*

Second year Sweet Clover is not very well suited for hay. The growth becomes coarse and woody as it comes into bloom and so hay must be made before that time. This is late in May or early in June, which is seldom good haying time.

The succulent stems also contain about 85% water and so they are slow to dry. If a crop of hay is to be taken, the plants should be cut high enough to leave some stubs of branches on the stubble, as new growth starts only from these.

Experiment Stations agree that Sweet Clover is too valuable for green manure or pasture the second year to use for making hay which at best will not be of very good quality.

## Seed Production

An important advantage of Sweet Clover is that it produces seed liberally wherever it is grown. The yields are high, averaging four to six bushels per acre, and sometimes as much as ten or twelve bushels is secured. The seed is generally cheaper than that of the other clovers.

### *Saving the Crop*

When a seed crop is to be saved, Sweet Clover should be pastured for a time during the second year, possibly until the middle of June. This will allow time for the seed to mature and at the same time keep the growth from getting too large.

The crop should be cut for seed when about three-fourths of the pods have turned dark, and only when damp from dew or rain, as the seeds shatter easily. When cut with a mower the swath should not be run over.



### *Cutting and Threshing*

The mower is not as satisfactory for cutting Sweet Clover for seed as the binder, because with the former too much handling is necessary. The self-rake reaper is best, but a binder can be equipped at small expense for handling the clover economically and with small loss of seed.

Corn harvesters are sometimes used if the growth becomes too large to be cut with a binder. If the stand has been cut for hay or pastured, the plants are smaller and are harvested more easily, so in this case a binder works nicely. This facilitates handling and makes it possible to use a huller, otherwise it is sometimes necessary first to thresh the coarse straw and then to run the seed through the huller.

## Growing the Crop

### *Time of Seeding*

The general practice in sowing Sweet Clover is to plant it in wheat like red clover, the best method probably being to drill the seed crosswise of the wheat as early as the ground can be worked. Some sow during the winter so that freezing and thawing will bury the seed and cause the hard grains to germinate. At this time unscarified seed should be sown.

NOTE:—Sweet Clover has quite a number of hard seeds. To hasten germination the seed coat is often scarified or scratched so that moisture can penetrate to start germination. Unscarified seed is usually sown during winter and scarified seed at all other times.

Spring seeding with small grain has proven more successful than seeding on wheat as a rule. Early oats or barley is better than late oats because they do not shade the plants as much. Seeding Sweet Clover alone should not be practiced unless it is known from previous



experience that weeds will not smother it. As explained before, seeding should always be done on a well prepared firm seed bed.

In summer Sweet Clover may be seeded alone or in corn. Sometimes it is sown as late as August 15th although this is not very practical since then the plant lasts only one growing season. On the whole, summer seeding is not very favorable as the crop won't amount to very much during a dry season, although remarkable growths have sometimes been made during wet seasons. At this time the scarified seed should be sown.

*Inoculation* Do not fail to inoculate Sweet Clover unless you have grown it or alfalfa on the same field recently and the roots had nodules on them. Inoculation is simple and cheap and repays its cost many times. Besides the fact that it enables plants to take nitrogen from the air, it also insures a better stand. (See page 67).

*Rate of Seeding* Ten or twelve pounds of hulled Sweet Clover is generally sown to the acre; 15 or 20 pounds of the unhulled seed should be used. For winter sowing it has become a custom to broadcast half the seed on frozen ground in February and the other half along in April after freezing weather has past. This increases the chances of having a full and uniform stand. We can furnish either the scarified or unscarified seed at the same price.

*Moisture Requirement* Sweet Clover will not respond to moisture as quickly as red clover, as more moisture is needed for germination even when the seed has been scarified. For this reason growers are sometimes surprised to find that they have a poor stand of Sweet Clover while in a neighboring field sown with red clover at the same time, the



growth has been entirely satisfactory. A lack of moisture just at the time of germination, or immediately after the young sprout is appearing, seems to affect Sweet Clover more seriously than any other clover. However, there is a very small percentage of failures in the seeding of Sweet Clover.

We quote from a letter received from the Department of Agriculture: "In regard to the failure of Sweet Clover to germinate or to live after germination when the seed bed is not firm, this appears to be entirely a matter of moisture supply. A loose seed bed is dry, especially when a period of protracted dry weather follows sowing. A firm seed bed is in contact with the moist subsoil. Just why Sweet Clover should be so much more sensitive than other clovers we cannot say. There are peculiarities of all varieties that we simply know exist, but we are not in a position to explain them."

A firm seed bed then is important, as it is in contact with the moist subsoil, so where necessary to plow, if possible the ground should be plowed in the fall and harrowed down.

While Sweet Clover, once it is established is very drought resistant, the plants when young must have an abundance of moisture on account of the deep growing roots.

*Inoculate Sweet Clover with*  
**SCOTT'S GUARANTEED BACTERIA**



## Alfalfa

The value of good seed has been demonstrated so often in the culture of Alfalfa that it hardly should be necessary to repeat the requirements of good seed here. However, there are still many Alfalfa failures due almost entirely to the planting of unadapted seed, or seed which is not free from weeds.

The federal seed staining laws protect you against unadapted imported seed. No such laws protect you against unadapted domestic seed, so even in purchasing American Alfalfa it is well to know in what states the seed was produced.

Established Alfalfa plants can hold their own against weeds, but young plants are sometimes smothered out by an aggressive stand of them. It is therefore very necessary that you sow seed free from weeds, especially dodder and buckhorn, which cannot be removed from Alfalfa except by special machinery. The cost of preparing the land is the same whether good seed or poor seed is sown, and the difference in the cost of the best and poor seed would never be over seventy-five cents or a dollar per acre. But if the cheaper seed is sown it may result in a total failure or at least reduce the value of the crop and raise the cost of harvest.

## Utilization

*Feeding Alfalfa* Whenever Alfalfa is raised it is possible to feed a balanced ration without buying the high priced concentrated feeds. Alfalfa will furnish the necessary amount of protein, the element which to a large extent determines the amount of beef and milk a given feed will produce. An average acre of this legume will furnish six times as much digestible protein as timothy and twice as much as red clover.



As a general rule Alfalfa is more valuable for hay than for pasture. Sometimes it is successfully used as a forage crop for swine or sheep, and where soil conditions are favorable it is more or less permanent. It withstands pasturing fairly well if not grazed too early in spring nor late in fall.

### *Helps*

### *Destroy*

### *Weeds*

Alfalfa is useful in eradicating some of our worst weeds. Patches of Canada Thistle and Wild Morning Glory may be choked out with a thick stand. The Alfalfa makes a quicker start in spring and after cutting, than do these weeds which is the main reason for its success as a weed eradicator. If this is to be done the land should be plowed as early in the fall as possible so that the weeds may be subdued with frequent use of a spring tooth harrow or disk. The next spring the field can be seeded with twenty pounds per acre of a hardy inoculated seed, such as Grimm, and a bushel of early oats sown with it. The weeds will grow up with the oats but they can be cut for hay when the oats head out. By this time a good thick stand of Alfalfa will be secured and this will then keep down most of the weeds.

## Growing the Crop

The point has been well made that "growing alfalfa is often a choice between buying feeds for the soil or buying feeds for livestock." Find out what your soil needs in the way of plant food by sending a sample to your experiment station. Well rotted manure is generally the best conditioner. A commercial fertilizer with a high phosphorus content is usually necessary. If the seed is inoculated the plants will gather their own nitrogen from the air, and also store some in their roots. Inoculation always encourages a more vigorous growth. Lime must be used on an acid soil. Lack of this has caused thousands of Alfalfa failures and so it

does not pay to take a chance. Test your soil and use the most economical form of lime. On most soils at least two tons of the ground limestone should be used per acre. The best Alfalfa soils should have good surface and underground drainage.

## *Winter Killing*

Good drainage and plenty of humus is the best insurance against winter killing. Late summer seeding should be avoided as well as late fall cutting and pasturing. A new stand of hardy Alfalfa will generally weather the worst of winters even when the old stands of the same strain are practically killed out. Because of this, new seedings of Alfalfa as a part of the regular farm rotation have become a method of reducing the loss from winter killing.

## *Seed Bed*

Alfalfa wants a firm but well prepared seed bed with the surface lumps broken up. Fall plowing is advisable, especially with the heavier soils, as it gives the land time to settle, and makes it possible to apply lime during winter. A cultivated crop, such as corn, should be grown on the land the preceding season, if possible, to avoid weed trouble and also interference by grasses. If this has been done it is not necessary to plow before seeding.

## *Inoculation*

Besides the fact that inoculation increases the yield of this legume, it also increases the protein content of the plants. The Illinois Experiment Station found that as an average 70 pounds of protein was added to a ton of hay by inoculating the seed. It has also been found that inoculation increases the chances for a good stand, and stores a large quantity of nitrogen in the roots at no expense. The cost is very small and the returns large.

*Seeding  
Time*

Where winters are particularly severe spring seeding can be practiced, but in milder climates, summer seeding is preferred because then weeds will not bother very much.

Some sow as early as June, but foxtail and other weeds are still apt to be a serious menace at that time; and so, because we don't like weeds, we prefer planting between July 20th and August 10th. Ground that is weedy should be put through a careful weed killing cultivation from early spring until seeding time. Of course the land can be used for a cultivated crop during this period. The second year's production of hay will almost invariably be greater from a late summer sowing in spite of the longer time for growing allowed by seeding in the previous spring.

*Seeding*

The amount of Alfalfa seed required per acre varies according to the fertility of the soil, quality of the seed, and method of planting. Twelve to fifteen pounds is usually sufficient. Alfalfa seed should be sown shallow; on heavy soils it is sometimes best to broadcast the seed and then cover it by a light rolling or harrowing. Drilled seed should be harrowed lightly to smooth out furrows left by the drill, as otherwise a heavy rain may bury the plants. Many sow in the spring with a bushel of any early grain, such as 60-day oats or barley, for a nurse crop. The grain may be cut for hay after it is headed out, or may be allowed to mature if there is no danger of smothering out the young Alfalfa plants.

"Please send me Scott's Seed Guide and price list. I have recently seen several fields of Alfalfa of which the seed was purchased from your house, and they were the very best I ever saw."—W. R. Lloyd, R. No. 2, Box 4, Oxford, Wisconsin.





## Harvesting

### *When to Harvest*

It is possible to cut three crops of hay from Alfalfa each year, but recent experiments at the University of Wisconsin seem to indicate that a larger total yield can be secured by cutting only twice during the season. Their conclusion is that cutting twice per year strengthens the plants against winter killing; aids in keeping out weeds and blue grass; and gives more hay with less work.

Using this plan one year old Alfalfa should be cut in full bloom each time, but the first crop of old stands should be cut in tenth bloom and then the other crop in full bloom.

### *Making the Hay*

The leaves of Alfalfa contain about twice as much protein as the stems and in the bud stage this is around twenty-eight per cent. Because of this, in making hay, every effort should be exerted to save the leaves. If the hay is allowed to dry too rapidly leaves are lost during the curing process. The greatest quantity of hay is harvested during the third or fourth season, as after this weeds, grass, etc., weaken the stand and so the yield decreases.

### *Curing*

Alfalfa should be raked into windrows and then put into cocks until after the leaves have wilted and the hay cured. A heavy crop may be tedded. The crop may be stacked or mowed while the stems are quite tough or flexible. Of course, any kind of hay, including Alfalfa, should not be exposed to the hot sun any longer than necessary. Too long exposure bleaches the leaves of Alfalfa and causes them to become brittle and fall off. Moreover, if the leaves have been burnt by the sun, they will not absorb the water in the stems, and the hay will cure slowly and unevenly. Curing through the action of air and wind is best; therefore Alfalfa should be cured in cocks, rather than in the swath.



## Grimm Alfalfa

### *We Guarantee Our Grimm Not to Winter-Kill*

Back in 1919 we adopted the policy of guaranteeing our Grimm Alfalfa not to winter-kill. This is the tenth time we have renewed this guarantee and we are glad to do it, as our confidence in genuine Grimm is just as firm as ever. This warranty is designed to give growers the necessary confidence, not only in our Grimm, but in the Grimm strain of alfalfa as a safe and profitable crop.

"The Grimm Alfalfa seed I bought of you was very satisfactory. I got a fine stand and it went through the winter in good shape. I have tried for several years to get a good stand of alfalfa with common seed but have failed, but the Grimm seems to be the proper seed for me. I was especially pleased with the way it wintered, as last winter was especially severe with us and much alfalfa was winter-killed."—Philip R. Leavenworth, Castleton, Vermont.

### *Winter Killing*

To guarantee that the seed will produce a satisfactory growth is hardly possible because too many things can happen before the alfalfa becomes established. However, if seed is sown early enough so that a growth of six to eight inches is realized before the plants become dormant, we will willingly and cheerfully replace the seed if the plants do not carry through the winter.

Grimm Alfalfa must of course be planted on ground where drainage and other conditions are favorable. Owing to the fact that dry weather may delay germination, so that the crop would not get a good start before winter, we believe that north of the Ohio River alfalfa should not be planted later than August 10th.



The proof of genuineness is hardiness. This is the only positive proof. Buyers are sometimes misled by a statement that Grimm is guaranteed to be true to name. This is not the same as guaranteeing Grimm not to winter-kill, as you could never prove that a stand of alfalfa was not Grimm, but you could prove that it had winter-killed if this were the case. Grimm seems to be more drought resistant than ordinary alfalfa and many farmers believe that on an average Grimm will produce more hay than any other strain. This contention has been proven by experiences at the Ohio Station. Different winter conditions cause alfalfa to kill. A rainy fall prevents the plants from becoming dormant early so that the plants are not sufficiently prepared for winter. Alternate freezing and thawing in clay or in humus-poor soil will break off the roots. Sheet ice sometimes kills alfalfa. Grimm Alfalfa has the qualifications that enable it to withstand these conditions better than any other variety.

### *Reasons for Hardiness*

It is not known just why Grimm is more hardy than any other alfalfa. No doubt this is due in part to the presence of yellow flowered alfalfa in its ancestry and also to the process of natural selection which took place under the severe climatic conditions to which it was subjected for a long period of years in Minnesota. It was in this state that the seed was introduced from Germany by Wendenlin Grimm in 1857. Another reason for its hardiness is its low set crown which affords protection to the most tender part of the plant. The branching tendency of the roots is also an aid. However, it is difficult to distinguish Grimm from ordinary alfalfa by examining its root system. It does not show so large a percentage of branching roots as one would be led to believe from illustrations of selected plants and from some advertisements.



*Identifying* It is very difficult to distinguish Grimm from other alfalfa. The seeds of both are almost exactly alike. There is not much difference between the plants except that there is a greater diversity of forms, upright and decumbent individuals often occurring side by side. When in full bloom Grimm shows a higher percentage of mixed or variegated flowers. The seed of Grimm Alfalfa has a definite market value like any other standard seed, and so Grimm at a very low price could not be true to name and would be an unwise buy.

*Danger of Weeds* In seed producing sections Grimm is grown for seed almost exclusively, owing to the extra price which the seed brings. The weeds in an alfalfa field tend to increase more rapidly when the stand is allowed to remain for seed each year than when the field is mown regularly for hay. For this reason Grimm seed should be purchased carefully.

*Inoculate Alfalfa with*  
**SCOTT'S GUARANTEED BACTERIA**



## Red Clover

Until recent years, Red Clover was the most important legume. In fact it has often been referred to as the cornerstone of a permanent system in agriculture. Of late, failures with this crop are becoming very common, and this has led to extensive investigations by our Federal and State Departments of Agriculture.

Why does Red Clover fail? Many explanations have been offered but it seems there are some underlying reasons which we do not know about. In certain sections Red Clover diseases have played havoc with the crop. Anthracnose has been especially destructive in the southern sections of Indiana and Ohio, as well as throughout West Virginia, Kentucky, Tennessee, Virginia and Maryland. This is a fungus disease which attacks the leaves, stems or roots. It usually appears in elongated spots which become black and brittle, eventually causing the whole plant to turn black. Among other causes of failure are, increasing soil acidity; lack of phosphates; and lack of nitrogen gathering bacteria. A deficiency of humus or organic matter, as well as poor drainage, contribute largely to the failures, because these encourage winter-killing. Unadapted imported seed has been another cause of failure, although the present seed staining laws will help overcome this difficulty. Imported seed is usually more susceptible to disease than domestic seed, and the crop winter-kills more easily.

### *Restoring Clover Soils*

Much can profitably be done to make soils capable of again producing good crops of Red Clover. Organic matter can be added by applying stable manure, or by raising a good green manure crop such as sweet clover or soybeans. This organic matter is most necessary as it provides better ventilation, binds the soil together and increases its water holding capacity, thus preventing win-



ter-killing, and furnishes food for friendly bacteria. Liberal applications of lime and fertilizers will help. Inoculation of the seed is very beneficial, as this will introduce the proper bacteria so the plant can gather nitrogen from the air to aid in its growth, as well as to store it in the plant roots. (See page 67.)

*Seeding and Harvesting* Best results are usually obtained from spring sowing, and for greatest germination the seed should be drilled in. In some sections of the country, where spring sowing fails, late summer seeding has proved advisable. This is especially true south of the Ohio River. The plants escape the hot, dry midsummer, which often kills or weakens them.

It is often the practice to cut Red Clover too late. If the blooms begin to ripen the plant is injured. If cut when just in bloom the second crop will be heavier, there will be no danger of harming the plants, and the hay will be more palatable. After being cut, Red Clover will not stand as much moisture as either alfalfa or soybeans. Thus it pays to cure it and get it into the mow or stack as soon as possible. If cut in the afternoon when the plants contain less moisture, the hay can be tedded the next morning, windrowed, shocked and put into the mow the same day. Partly cured Red Clover hay will be damaged by a soaking.

*Weeds* Red Clover matures about the same time as some of the worst weeds, as, for instance, buckhorn, wild carrot, sorrel and dodder. For this reason it is very difficult to find Red Clover free from weed seeds.

We give especial attention to Red Clover seed because we sell more of it than of any other seed. It has always been our policy to supply seed practically free from weed seeds and waste matter, and we expect to continue doing it. While we do not recommend European Red Clover we will probably list the best variety of French grown seed, because it is so much lower in price than domestic and some want it.



## Mammoth Clover

*Warranted True to Name*

Mammoth Clover, also called English, Sapling, and Pea Vine Clover, like red, is a biennial; but where soil and climate are particularly favorable, or where prevented from producing seed, it is likely to show a perennial tendency.

### *Nature of Growth*

Mammoth grows to a greater height than red clover and has larger and deeper roots. For this reason it will often do well on soils where medium clover does not make a satisfactory growth. Seeding practices for Mammoth Clover are practically the same as those for red clover.

The very heavy growth usually smothers out most of the weeds and as a result we can always furnish Mammoth that is free from weed seeds. This clover is supposed to be less subject to diseases than red clover. This may be because of its more vigorous growth and long roots which draw plant food from a greater depth.

### *For Hay*

On poor soils Mammoth makes more desirable hay than on good soils because the growth is not so rank. It is especially superior to red clover on sandy soils, and excels it as a green manure crop on account of the large growth of its roots and stems. Mammoth makes hay about three weeks later than red, so it is much better for sowing with timothy or red top, as red clover is over-ripe at the proper time for harvesting either of these. While the hay is coarser than red clover it has the advantage of ripening later in the summer when there is less danger of rain.

### *For Seed*

If a seed crop is to be harvested the clover should be pastured until about the first of June, or clipped, otherwise the plant is likely to exhaust itself in the production of stems and leaves. However, if the season is especially dry, care must be used in pasturing as

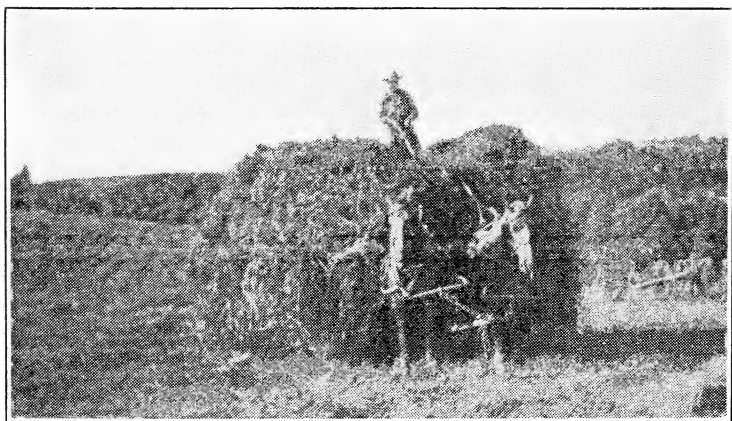


the plants may not make enough after-growth to produce a large seed crop. On very poor soils it may be advisable not to pasture or clip at all. Mammoth makes a much surer crop of seed than red, and matures about three weeks earlier.

### *Identifying the Seed*

The seeds of Mammoth and red clover are so nearly alike that they cannot be distinguished. This likeness has resulted in much annoyance to the grower. Formerly, we received many letters every year asking us how we were sure our Mammoth was true to name, because so many farmers bought what was claimed to be Mammoth seed but which produced a crop of red clover.

This seemed to be the common experience all over the country. For this reason we guarantee the genuineness of any Mammoth Clover seed purchased from us, and will refund the full purchase price of any which does not prove to be genuine.



*Showing Mr. N. J. Crees, of New Galilee, Pennsylvania, hauling in a load of Mammoth Clover. In sending this picture Mr. Crees wrote: "I have bought Mammoth of you many times and always get it true to name." He should know, because since 1919 Mr. Crees has bought Scott's Mammoth Clover ten times.*





## Alsike

At one time Alsike was thought to be a hybrid between white and red clover on account of its appearance and habit of growth. Now, however, it is considered as a distinct species.

### *Nature of Growth*

While not strictly a perennial, Alsike usually remains in the ground for several years. Enough of the heads escape mowing and the grazing of stock to do much toward reseeding. It is particularly adapted to wet soils, sometimes doing well in standing water. Alsike will grow much better on acid soils than red clover and will also resist winter-killing to a greater extent. The diseases that attack red clover do not affect it at all.

Alsike gathers nitrogen from the air the same as red clover and other legumes, and would be as valuable in the rotation as a soil builder except for its smaller root and stem growth.

### *Use in Mixtures*

For growing with timothy, Alsike is preferred to red clover, as these two ripen together and the timothy is not crowded by Alsike as it is by red clover. Quite often it is sown with red clover since it interferes but little with the growth of the latter, and should the red clover fail to grow, or be killed, the Alsike will probably take its place. The spreading roots of Alsike will quite often keep red clover from "heaving." As there are 700,000 Alsike seeds to a pound, and 250,000 in a pound of red clover, it takes much less of the former to sow an acre, and less Alsike should be used when the two are to be sown together.

Quite often we have Alsike seed with timothy or white clover in it which we can sell at a special price.



*For Hay  
and Pasture*

Except where grown for seed it is usually best to sow some other seed with Alsike, such as timothy, orchard grass, blue grass, or red clover. A good hay mixture is three parts timothy, two parts red clover, and one part Alsike. South of the Ohio River, Alsike, red top, and orchard grass make a desirable mixture for a semi-permanent pasture. As the seed is so small it should be covered lightly, and 6 to 8 pounds per acre is sufficient.

*Weeds in  
the Seed*

Probably because of acid soil, Canada Thistle, Sorrel and Buckhorn infest many of the sections where Alsike is raised for seed, so it is well to look for these weeds when testing samples. They cannot be entirely removed in cleaning, as many of them are the same size as Alsike. This is especially true of Canada Thistle.

Owing to its smaller size Alsike is hard to clean, but by using care in buying we are always able to furnish seed that is practically weedless.

## Crimson Clover

Crimson Clover is said to be a native of southern Europe. It was introduced into Chester County, Pennsylvania, in 1820, but its distribution was quite limited until about 1880. Crimson Clover is a winter annual, that is, being sown in late summer it goes through the winter in a green state, matures its seed and dies in the spring. It will seldom withstand the winters north of the 40th parallel. The fact that it is imported would indicate that the seed generally contains a lot of noxious weeds. This is usually the case and so a careful examination should be made before buying. Use our test.



## White Clover

White Clover is usually called White Dutch to distinguish it from White Sweet Clover. As it grows almost anywhere everyone is thoroughly familiar with it. Many alsike fields contain White Clover, and when the seed is harvested the two cannot be separated. Sometimes we have this mixed seed at prices lower than when the two seeds are bought separately.

## Japan Clover

For years Japan Clover, or Lespedeza, has proven itself a valuable plant in the South. Its possibilities in the northern states are being realized, as now it is grown in southern Pennsylvania, Ohio, Indiana and New Jersey. It will grow on almost any type of soil, and even thrives on dry hillsides and acid soils.

Lespedeza is an annual and far enough south will reseed itself if not grazed too closely. It is used mostly as a pasture crop, since it will renew old, thin pastures and affords good forage during July and August when other feed is scarce.

Early spring sowing is best in a winter grain or with some other nurse crop, or it can be sown in mixtures. If seeded alone, about 25 pounds per acre should be used. The seed comes unhulled and ordinarily contains considerable waste matter. Scott's Japan Clover is better because it is re-cleaned to remove as much waste as possible and all objectionable weeds.

Korean Lespedeza is a new variety introduced into this country about 1922. It does not seem to have any advantage over the common strain, except that it matures a little earlier, and in the central states it seems even inferior to the common.



## The Vetches

Of the many kinds of Vetch, but two are of agricultural importance in this country, namely, Hairy Vetch and Common Vetch. In the latter there are both winter and spring strains but only the spring strain is used except in the states south of Tennessee. This spring Vetch is an annual and it is used very little except on the Pacific Coast.

### Hairy Vetch

*We Supply Home Grown Vetch Only*

Russian and Sand are other names for Hairy Vetch, a winter annual, which is our best leguminous winter cover crop. It lives through the most severe winters, thrives well in sandy soils, and withstands drought better than other legumes. When inoculated the plant is an excellent nitrogen gatherer. In feeding value, as hay or pasture, it is equal to red clover.

#### *Cultivation*

It is advisable to sow a small grain with Vetch to support the weak stemmed vines, as they grow better off the ground. Rye is usually seeded with it, using a grain drill and sowing 20 to 30 pounds of Vetch with 3 to 5 pecks of rye. The more Vetch seed used the greater will be the soil improvement. The seed should be sown in August or early September, or it may be seeded alone in the spring for pasture or with oats or barley. In either case it will make an excellent summer pasture.

#### *Harvesting*

The hay is easily cut with a mowing machine or pea harvester. If it is to be stored the crop should be cut when the pods are about half formed, as then it can be easily and quickly cured. Sometimes the crop



is fed green, and if this is to be done it should be cut when the plants are in full bloom. It may be grazed for a short period in spring without reducing the hay crop very much. Domestic Hairy Vetch has a higher percentage of germination than the imported and is usually weed free.

## Canada Field Peas

### *Good Green Manure*

Field Peas are usually spoken of as Canada Field Peas, the name having been given when the plant was comparatively unknown and the seed mainly imported from Canada. However, only a few varieties originated in that country.

Being a legume, the crop is a soil improver and furnishes a ration rich in protein. The peas can be sown for soiling and fodder, and for green manure. They are usually sown with oats, about one bushel of each, thoroughly mixed. This combination makes a very desirable hay or soiling crop, the yield being quite large.

Unlike cow peas they should be sown as early as possible in the spring, and do best farther north than Central Ohio.

One bushel of Field Peas, one bushel of oats, four pounds of dwarf Essex rape and eight pounds of sweet clover make excellent hog pasture that can be sown in the spring, the pigs being turned in when the oats and peas are about eight inches high. The clover may be omitted. Inoculate Field Peas for best results.

*Inoculate Vetch and Field Peas with*  
**SCOTT'S GUARANTEED BACTERIA**

*See freight paid offer, page 75*



# Hay and Pasture Grasses

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## Timothy

Timothy was first brought into this country from England by Timothy Hanson, of Maryland, in 1720. It is distinctly a grass for hay rather than pasture, as it does not take kindly to trampling and close grazing. It is our hardiest and best known grass and is a part of all mixtures.

The facts concerning seeding, harvesting, etc., are so well known that it is unnecessary to enumerate them.

Often Timothy seed contains a considerable amount of sorrel owing to the fact that both grow on acid soil. It is well to be on the lookout for this and also for Canada thistle, which is not easy to identify in Timothy seed. In this seed you will nearly always find a small amount of alsike, and quite often grasshopper specks. It is not possible to entirely remove either of these, and while they hurt the looks of the seed, they make no difference in the quality, and should not be confused with black plantain, which is somewhat triangular and flat.

One peck is the amount usually sown per acre, or, if clover is to be sown in the spring, a bushel to six acres. A satisfactory mixture is 7 pounds Timothy, 7 pounds red and 3 pounds alsike.

## Kentucky Blue Grass

This variety of grass is native both to Europe and to North America, and, shares with two or three other similar species, the rank of greatest American pasture grass. Authorities are of the opinion that it is grown more or less in every state of the Union. It makes the best sod of any of our grasses and does fairly well



on a wide range of soils, although better adapted to clay than to sandy loam. It is a very nutritious pasture grass, but has little value for hay. The fact that it is both an early spring and a late fall grower makes it valuable for grazing at both ends of the season. Kentucky Blue Grass constitutes a part of practically every lawn and pasture mixture.

### Orchard Grass

*Note the very low price of Orchard Grass this year, compared to bluegrass.*

Orchard Grass, known as Cocksfoot in England, is a native of Europe. Its American name is due to the fact that it is successfully grown in partially shaded places.

This grass will stand more drought than Kentucky blue grass, but it is not especially adapted to dry land conditions. It starts very early in the spring and grows rapidly so that it is valuable in a pasture mixture. It does not permit an even sod, as it is inclined to grow in tufts or bunches. Although of high nutritive value, Orchard Grass is not relished by stock as much as blue grass or redtop. It thrives best on rich, well-drained loam, and makes a good growth in shady places. 28 pounds is the amount usually sown per acre.

Our test should be used, as it is seldom possible to get Orchard Grass that does not contain a considerable amount of dock and sorrel and quite often buckhorn, all noxious weeds.

### Red Top

Red Top belongs to a family of grasses that is very widely distributed over the globe. It is a perennial which ranges in growth from a few inches to three or four feet according to the condition of soil and climate. Growth starts later in the spring than Kentucky blue



grass, is slower and maturity is later. Red Top is valuable for pasture and hay, but does not equal timothy for the latter. While adapted to a great variety of soils it does especially well on wet bottoms and should always be included in mixtures for such land.

About 15 pounds of clean Red Top should be sown per acre.

### Miscellaneous Grasses

Besides the grasses already mentioned, we are able to offer such varieties as are in general demand: Meadow Fescue, Canada Blue Grass, Rye Grass, and all imported fancy grasses.

### Pasture and Meadow Mixtures

A mixture gives a longer period for grazing, furnishes a greater variety, yields a crop richer in protein and makes a better balanced ration, than would the grasses composing the mixture if sown separately. But it does not pay to sow in a mixture any grass that will not do well alone.

*Pasture Mixtures* In choosing the grasses to go into the mixture such varieties should be selected that the good qualities of one will balance points in which the other is deficient. For example, the grass that forms roots on the surface is not desirable from the standpoint of fertility; another may send its roots fairly deep, but not be as suitable for pasture grass as the other. The two make a combination well adapted to grazing and maintaining fertility. Pasture Mixture grasses should be selected with respect to their periods of growth so that grazing may be done through the longest possible period.

A small amount of various clovers should be included in a Pasture Mixture, as legumes not only feed





the grasses by pumping plant food from great depths to the surface, but also supply them with nitrogen drawn from the air, and, no doubt, greatly increase the protein content of the grasses. A small amount of alfalfa will do much towards getting the soil inoculated. White clover will grow where nothing else will and alsike does well in wet places. Due consideration must be given to the fact that the kinds of grasses that should be used depend upon the locality. Even in a single field, parts will be found that are adapted to grasses that will not thrive in the rest of the field.

Salting patches of such weeds as quack and wire grass to induce close grazing will often rid the field of these pests. Those weeds most distasteful to cattle thrive best in meadows.

Sow pasture mixtures at the rate of 20 to 50 pounds per acre.

### *Early Pasture*

Annual pasture mixtures have become popular. More energy value from the same acreage can be procured when these are used as soiling crops. Canada field peas and oats probably take first rank. Rye and vetch as well as Japan millet and dwarf

Essex rape are also used. Any of these can be added as desired to the following mixtures which we recommend:

- No. 1. 8 pecks oats, 4 pecks field peas.
- No. 2. 4 pecks oats, 3 pecks barley, 3 pecks rye.
- No. 3. 6 pecks oats, 5 pounds sweet clover.  
6 pounds timothy, 5 pounds alsike clover.

### *Meadow Mixtures*

Meadow Mixtures, in contrast to pasture mixtures, should contain grasses that mature at about the same date.

For reasons already stated it is more profitable to sow a mixture of several grasses, including clovers, for hay rather than to sow one kind alone, for then the roots fully



occupy the ground to a considerable depth, each variety getting its food from a different level, the legumes acting as feeders for the grasses.

### Lawn Seed

We are entering upon an age of good lawns. In the past anything that was green seemed to answer the purpose, but now we look at the matter differently.

Even real estate firms have come to realize that an attractive lawn helps to sell a house. It isn't that the grass in itself is so valuable, but a humble looking house with a big velvety lawn becomes a home and homes are worth more than houses.

To make and maintain a beautiful lawn is not the easiest thing in the world, but our booklet, "The Seeding and Care of Lawns," tells how to get the most out of your efforts and expense. We will gladly send you a copy on request.

It is "good lawn insurance" to sow Scott's Lawn Seed. We do not believe there is a purer or better mixture on the market. Considering that fact you can't make a more economical purchase. A pound will go twice as far as a pound of ordinary lawn seed.

*To sow SCOTT'S SEEDS is to insure  
your fields for bigger yields.*



# Forage and Catch Crops

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## Sudan Grass

Sudan Grass is a quick-growing annual which is becoming increasingly popular because it will thrive on almost any kind of ground, will withstand drought, and gives abundant yields. Throughout the corn belt it is probably the most desirable catch crop of the grass family, as it makes good hay, pasture, ensilage and soiling. Its feed value is fully equal to that of timothy and it is relished by all stock.

The usual seeding time is from two weeks after corn planting until the first week in July. For hay or pasture the seed may be broadcast or drilled at the rate of 15 or 20 pounds per acre. Two crops of hay can sometimes be cut, the first one about sixty to eighty days after seeding, as the first heads appear, and the second forty-five days later. This hay is easily cured in cocks.

As a pasture plant Sudan furnishes plenty of green, rich forage during dry weather. It can be grazed as soon as the plants are two feet high, and if practicable the field may be divided in half and pastured alternately. An acre should support one to three cows for two or three months.

## The Millets

The term Millet takes in a large group of quick growing annual forage grasses. The Foxtail group is most extensively used and cultivated in America and



consists of the Golden, Hungarian, Common and Japanese varieties.

Golden Millet, sometimes called German, is most largely used, especially in the West, and most of the seed comes from that section. Sow 35 to 50 pounds per acre about two or three weeks after corn planting. The best Golden Millet is cultivated for seed in Tennessee.

Hungarian Millet is smaller and matures earlier than the Golden. The hay is somewhat more desirable as it does not get as coarse. Seed the same as Golden.

### Dwarf Essex Rape

Dwarf Essex Rape is valuable as pasture for cattle, sheep, and for hogs especially. It grows from one and one-half to four feet high and lasts longer in fall than other pasture crops. The cost of sowing is small, as only 4 or 5 pounds per acre are required.

*37 State Experiment Stations use SCOTT'S SEEDS*



# Grain

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## Corn

The best insurance against loss of labor in growing Corn is to be certain that good seed is planted. A good crop was never produced from poor seed, as a maximum yield can be expected only when there are no weak or missing stalks. To plant one bad ear means about 900 weak, barren, or missing stalks to the acre. Cultivation, fertility and drainage of the soil affect the production of Corn, but the crop depends first upon the selection of seed.

### *Cultivation*

The need for cultivation is appreciated by everyone but the proper practices are not always known. As a three year average, the Ohio Experiment Station found two or three inch cultivation to be best, as either deeper or more shallow working reduces the yield of both grain and stover considerably. By the time the plants are two or three feet high the roots have spread from hill to hill and working the soil deep at this time is apt to kill them.

### *Grading Corn*

The butt grains of the cob are fertilized first, and the pollination then proceeds in regular order toward the tip. Owing to the delay in development of the tip grains they are thought to vary from type more often than the grains on the rest of the ear. Experiments conducted by the Kansas Experiment Station, in the field, showed that 90% of the middle grains, 86% of the butt grains, and 70% of the tip grains produce plants.



This indicates that Corn should always be carefully butted and tipped by hand before grading, for no grader will entirely eliminate these undesirable grains. If they are not removed the planter is likely to drop the seed unevenly which will cause a smaller stand, as a uniform number of grains to the hill or space must be planted to insure the largest yield.

## Varieties

At the time this guide is published it is impossible for us to know just what varieties of Corn we will have to offer, other than those listed. We will no doubt have the Woodburn and one or two others.

The practice of treating seed Corn with a disinfectant has proven to be very worth while. We can furnish the Du Bay product for this purpose at the regular retail price. As this material is classed as a poison it cannot be sent by mail but we could send it along with the seed.

**LITTLE COB YELLOW DENT.** A grower in a nearby county developed this variety over 40 years ago. We have sold a great deal of it and have found that it has given better satisfaction than any other variety that we have ever listed. Owing to the characteristic small cob we named it Little Cob and are selling it in increasing quantities every year. It is a carefully selected, high bred Corn, and, as we sometimes find a single ear of Flint in a field of it, we suppose there was a mixture of Flint in the original selection. This may account for its very small white cob and the fact that it matures early and thoroughly.

For a quick ripening, all around Corn we know of none that will give better satisfaction. We recommend it for early ensilage, as the stalk contains more leaves than other varieties. If you are not entirely satisfied with the Corn you are growing we suggest that you



give this variety a trial. It matures in about 110 days.

We have discontinued selling late varieties. The percentage of failures is too great. We believe there is no variety that will surpass Little Cob as a general all round Corn.

“Do you still have some of the Little Cob corn? I find that I saved for seed is no good, and I want to be sure to get some, as I think it a great corn.”—  
A. L. Rexroad, Stone Creek, Ohio.

**EARLY YELLOW DENT.** This is a medium sized early Corn and quite popular in many sections of the country.

**EARLY CLARAGE.** This yellow Corn matures in about 110 days and never fails to ripen. The ears are fair size. It is a very satisfactory yielder.

**McGINNIS.** An early white cap variety maturing in about 110 days.

**ENSILAGE CORN.** We have found that Red Cob, Eureka and Blue Ridge are the most popular varieties for ensilage. The Eureka and Blue Ridge are the same Corn as far as production of ears and stalks is concerned. The former seems to be a selection of the Eureka with a wider and larger grain.

**BLUE CLARAGE.** An early, sure-ripening variety, claimed to be especially liked by hogs because of being sweeter than other Corn.



## Wheat

Owing to the fact that a threshing machine goes from one farm to another always carrying at least a few grains from each place, it has been extremely difficult to supply Wheat that is unmixed, but by specializing in the excellent varieties developed by the Ohio Experiment Station, we are able to furnish seed that is practically pure. Two varieties, Trumbull and Fulhio, have become very popular in states other than Ohio, owing to the fact that they are both good milling wheats and large yielders.

Wheat should be sown two bushels to the acre, as it has been shown through many tests that where this amount is used more profit is realized than where six, seven or nine pecks are sown. There is absolutely nothing in the claim that a peck or half-bushel of certain varieties is enough for an acre.

**TRUMBULL.** This beardless variety is a selection from Fultz. It is a smooth, semi-hard Wheat, much liked by millers; and what is more interesting to the grower, a large producer. Probably more of it is sold in Ohio and neighboring states than any other kind.

**FULHIO.** A beardless selection of Fultz introduced by the Ohio Experiment Station. While not as well known as Trumbull, it yields fully as well and is becoming popular. On a ten-year average at the Ohio Experiment Station this variety produced the second highest yield, giving  $38\frac{1}{2}$  bushels per acre.

**NIGGER.** A bearded heavy yielding variety. The grains are larger, plumper and harder than most soft winter kinds. We cannot recommend it too highly.

**SPRING WHEAT.** We can supply the Marquis variety.





## Oats

While we list below the Oats that we ordinarily can supply in any quantities, at the time of writing this it is impossible to tell what varieties we will have to offer this year in addition to those listed. Nearly all Oats are discolored because of rain at harvest time.

**SCOTTISH CHIEF.** For a number of years we have sold these Oats and as they are produced plentifully in this county, we can sell them at a very satisfactory price. They come to our elevator in large quantities and we select the best crops for seed. They originated from a car of Canadian Oats which we distributed ten years ago. The Oats are heavy and plump, and large producers.

**SIXTY DAY.** Not only is this the earliest variety of Oats, but it is also one of the largest yielders. Owing to its extreme earliness it will make a crop where later varieties will fail. The straw is short and does not lodge, which makes it particularly desirable for a nurse crop. It has good feed value for the reason that the hull is thin and light. It is one of the best varieties for soiling in connection with field peas.

Mr. W. M. Brause, Bloomville, Ohio, has this to say about Scott's 60 Day Oats. "If you remember, in March last spring I bought five bushels of 60 Day Oats which I did not sow until May 10th, and they made 30 bushels of good grain to the acre. They ripened about twenty days ahead of our other oats."

**MIAMI.** This is what the Ohio Experiment Station says: "Formerly known as Ohio No. 6203. Originated as a pure line selection from the Siberian variety in 1906. Spikelets 2-3 grained, kernels white, awns weak, straw medium stiff. Average height, 40 inches; tillering power good; medium maturity. Has



the highest ten-year average yield of any variety on Experiment Station farm at Wooster."

FULGHUM. This is one of the best known and highest yielding early varieties.

## Rye

Rosen variety has entirely replaced the old White Rye. It produces less straw and a larger yield of grain.

## Barley

ODERBRUCKER is probably the best known and largest yielding bearded Barley. We no longer try to supply the beardless varieties, as they are all small yielders and usually badly mixed. The new barbless strains, such as Velvet, are replacing both the bearded and beardless.

VELVET is one of the new barbless varieties, and was developed by the Minnesota Experiment Station. It is smooth awned with a white kernel and yields as heavy as the bearded awned varieties and is as satisfactory to handle as the beardless which it greatly outyields. This type of Barley should eventually take the place of all other kinds.

*We pay the freight, see page 75*

*If weeds are worth more to you out than  
in, sow SCOTT'S SEEDS.*



## Legume Inoculation

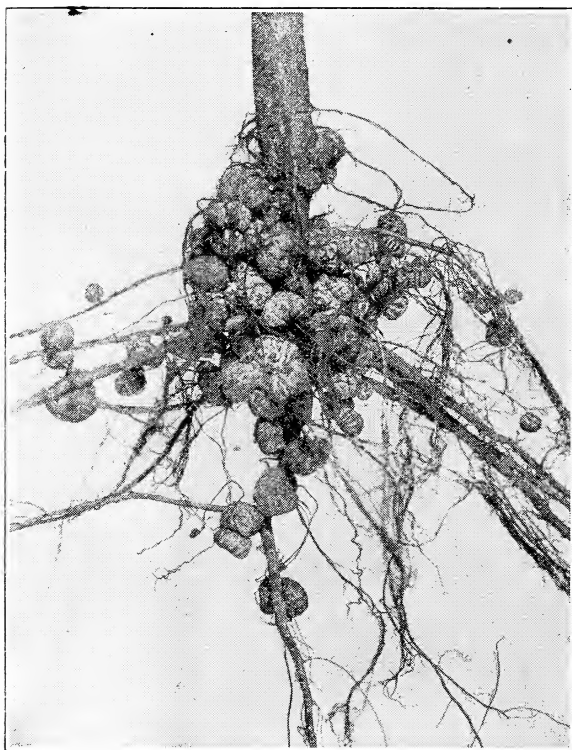
There is no question of the value of legumes on the farm. The problem is to utilize them to the greatest possible extent and make them "board themselves and pay for the privilege." If this is done legumes will have a beneficial effect upon the soil by adding organic matter; making plant food available as the plant materials decay; and adding nitrogen by the activities of the nodule organisms.

These favorable conditions are dependent upon one thing only and that is proper inoculation. What is inoculation? It is the bringing together of the legume plant and the bacteria which cause nodule production. These nodules (see illustration on page 69) are tubercle-like swellings on the roots which house millions of bacteria. And these are then able to take nitrogen from the air and feed it to the plants. In this way nitrogen is taken from the air at no cost—the real advantage of inoculation. Only inoculated legumes can do this, as no other plants have this ability nor do uninoculated legumes. The big problem on our farms today is to return nitrogen to the soil at the least possible expense. Some farmers have waited for the development of cheaper nitrates—others have located nitrogen factories on their own farms. They grow more inoculated legumes.

In addition to adding nitrogen, inoculation often has striking immediate effects upon the yield and quality of the crop. The Wisconsin Station has found, for example, that the weight of inoculated alfalfa was considerably greater than that of uninoculated alfalfa. Besides, the quality was better and the feeding value increased by a higher protein content. Complete crop failures may be the result of lack of inoculation, as ex-

periments have proven that inoculated seed is much more apt to produce a good stand than uninoculated seed.

Plants become inoculated either by the proper bacteria being in the soil, or by treating the seed with a



*Showing nitrogen nodules on soybean roots. These are the factories which manufacture nitrogen without cost. Photo from Bulletin No. 310 Illinois Agricultural Experiment Station.*

good commercial culture such as Scott's Guaranteed Bacteria. The latter method is more satisfactory as it is the only sure way and the cost is very small. Self-



inoculation cannot be relied upon unless the same crop has been grown on the same land before and nodules were developed on the roots. This is not entirely safe either, as the organisms die out rapidly, especially in soils that tend to be acid.

To fully appreciate the value of inoculating legumes, we suggest the reading of our booklet, "Friendly Workers of the Soil." This tells the whole story clearly and completely in ten lessons. This book has been used by more than 500 instructors in Agriculture, who are well pleased with it because of the clear and concise manner in which the subject is presented.

## Scott's Guaranteed Bacteria

In buying inoculated materials, there are three factors worthy of the greatest consideration. These are: ease of application, economy and guaranteed results.

To make inoculation easier Scott's Bacteria is prepared with sand as the carrying medium. This is easily mixed with water and distributed over the seed. The cost of the bushel sizes of Scott's Bacteria is small and the special price on 5 bushel sizes makes inoculation costs almost negligible. We guarantee that Scott's Bacteria will produce nodules and be satisfactory in every way. If it fails to please you we will cheerfully refund the purchase price.

### *Culture Groups*

Bacteria that produce nodules on one legume will not produce them on all legumes. However, some bacteria will inoculate more than one legume so we are listing here the different ones which are inoculated with the same strain:

Group 1. Alfalfa and Sweet Clover.

Group 2. Red, Mammoth, White Dutch, Alsike and Crimson.



## SCOTT'S SEED GUIDE

- Group 3. Vetches, field and garden peas.  
 Group 4. Field and garden beans.  
 Group 5. Cowpeas, Japan Clover, Lima and Velvet Beans.  
 Group 6. Soybeans.

### Prices

*For all above groups except Soybeans*

For 1 bu. seed.....	\$1.00 post paid
For ½ bu. seed.....	.50 post paid
For 5 bu. seed, Alfalfa or Sweet Clover	3.50 post paid

### *Soybeans*

For 1 bu. seed.....	\$0.50 post paid
For 5 bu. seed.....	2.00 post paid

### Rush Order for Scott's Bacteria

Send me immediately postage paid:

- .....Cans for Sweet Clover or Alfalfa.  
 .....Cans for Red, Mammoth, Alsike, Crimson,  
 White Dutch.  
 .....Cans for Vetch, Field or Garden Peas.  
 .....Cans for Cowpeas, Japan Clover.  
 .....Cans for Soybeans.  
 .....Cans for .....

Check enclosed for \$.....

Name .....

Address .....



## Ordering Instructions

*Order Early.* It always pays. Prices may be no higher, but sometimes it is impossible to get the best seed late in the season.

*Order Blank.* Use it please. When shipping point is different from your mail address give county under each name.

## Change in Price

All seed must be sold on the basis of market quotations. It is for this reason that our prices are for prompt acceptance. A slight fluctuation, however, does not affect them. We always accept orders at the prices quoted if at all possible, but we must follow any material changes whether they are up or down.

## Terms

We will ask you to kindly send a full remittance with your order, a personal check, bank draft or money order is acceptable. If you are not sure of the exact cost of your seed, just send a blank check, protecting yourself by writing in, "Not good for over \$....." and we will fill in the correct amount.

If you prefer, we can send your seed draft attached to bill of lading. In this way you can get the seed from your freight agent by paying for it at your bank.



## Bags

Cotton bags are still priced low. By allowing for them in your order you can lay in a supply at a reasonable cost. They are sold to you at exactly what we pay for them. It is not possible to furnish bags free without adding to the cost of the seed.

If you have a surplus of sacks you may send them and we'll be glad to use them for your order. Be sure to mark your name on them so we know who sent them and *also tell us in the order that you are sending bags.*

## Delivery

Our central location enables us to guarantee prompt delivery of your orders. We are situated in the central section of Ohio, which is served by a net work of the largest and most important railroads and electric lines. Two of these steam railroads serve Marysville, while the others are all accessible with only one transfer. These two lines are the Big Four and New York Central.

Marysville is the county seat of Union County, located in the west central section of Ohio. It is 30 miles from Columbus, 135 miles from Cleveland and 100 miles from Toledo and Cincinnati.

All orders are given immediate attention and carefully routed for quickest delivery. If for some reason your shipment is delayed in transit, and the seed arrives too late to use, you may return it to us transportation charges collect. We will then cheerfully refund your money.

"I was very much satisfied with the seed, and also the prompt attention you give my orders."  
—Mr. Charles W. Scheu, Dayton, Ohio.





## Parcel Post

Seed may be sent by parcel post according to the following table. In the first, second and third zones the weight limit is 70 pounds; in the others the weight limit is 50 pounds.

### Zone Rates

#### ZONE

1st up to	50 miles away.....	1c per lb. plus 6c
2nd up to	150 miles away.....	1c per lb. plus 6c
3rd up to	300 miles away.....	2c per lb. plus 6c
4th up to	600 miles away.....	4c per lb. plus 5c
5th up to	1000 miles away.....	6c per lb plus 4c
6th up to	1400 miles away.....	8c per lb. plus 3c
7th up to	1800 miles away.....	10c per lb. plus 3c
8th over	1800 miles away.....	12c per lb. plus 3c



## Freight and Express Rates From Marysville, Ohio

	Freight LCL				Freight LCL		
	Clo- ver	Soy- beans	Ex- press		Clo- ver	Soy- beans	Ex- press
<b>Illinois</b>				<b>Ohio, Continued</b>			
Chicago .....	\$ .55	\$ .41	\$1.54	Freeport .....	\$ .42	\$ .22	\$1.09
Danville .....	.52	.40	1.39	Lancaster .....	.32	.24	.86
Springfield .....	.60	.45	1.84	Lima .....	.32	.24	.86
<b>Indiana</b>				Mansfield .....	.34	.25	.94
Evansville .....	.52	.40	1.84	Pomeroy .....	.43	.33	1.09
Indianapolis .....	.46	.35	1.39	Portsmouth .....	.45	.34	1.39
South Bend .....	.53	.40	1.39	Sandusky .....	.38	.28	1.09
<b>Kentucky</b>				Toledo .....	.38	.29	.94
Bowling Green ....	.85	.54	1.87	Youngstown .....	.47	.35	1.39
Hickman .....	.95	.63	2.25	Zanesville .....	.35	.27	1.24
Lexington .....	.69	.46	1.39	<b>Pennsylvania</b>			
Owensboro .....	.67	.52	1.84	Clearfield .....	.72	.50	1.84
Prestonsburg .....	.79	.58	1.87	Ligonier .....	.45	.35	1.54
Williamsburg .....	.89	.53	2.06	Meadville .....	.70	.48	1.39
<b>Michigan</b>				New Castle .....	.48	.36	1.39
Detroit .....	.45	.34	1.24	Philadelphia .....	.70	.48	2.32
Grand Rapids .....	.52	.40	1.39	Pittsburgh .....	.51	.38	1.54
Jackson .....	.46	.35	1.24	Scranton .....	.74	.51	2.32
Ludington .....	.70	.52	1.54	Wellsboro .....	.72	.50	1.99
<b>New York</b>				Wilkesbarre .....	.70	.48	2.21
Albany .....	.73	.51	2.32	<b>Tennessee</b>			
Buffalo .....	.56	.42	1.84	Knoxville .....	.88	.70	2.21
Canton .....	.80	.57	2.32	Pikesville .....	1.61	.77	2.36
Delhi .....	.70	.48	2.21	Decaturville .....	1.13	.36	2.47
Elmira .....	.61	.43	1.99	Fayetteville .....	1.10	.35	2.44
New York .....	.76	.53	2.44	<b>Baltimore, Md</b> .....	.73	.50	2.21
Rochester .....	.56	.41	1.99	<b>Boston, Mass.</b> .....	.81	.57	2.62
Syracuse .....	.61	.43	2.10	<b>Concord, N. H.</b> ....	.80	.57	2.77
<b>Ohio</b>				<b>Des Moines, Ia.</b> ....	1.24	.97	2.44
Athens .....	.38	.28	1.09	<b>Hartford, Conn.</b> ....	.80	.57	2.62
Cambridge .....	.35	.27	1.09	<b>Portland, Maine</b> ....	.80	.57	2.77
Celina .....	.34	.25	.94	<b>Providence, R. I.</b> ...	.80	.57	2.70
Cincinnati .....	.39	.30	1.09	<b>Washington, D. C.</b> ...	.72	.50	2.10
Circleville .....	.31	.25	.86	<b>Wilmington, Del.</b> ...	.70	.48	2.32
Cleveland .....	.44	.31	1.09				



## *We Pay the Freight*

*On orders for three hundred pounds or more we pay the freight charges to thirteen of the East Central States. While we do not pay express charges we will, on orders of 300 pounds, allow the equivalent of the freight charges.*

*The states to which this policy applies are as follows: Ohio, Pennsylvania, West Virginia, New York, Illinois, Virginia, Michigan, Indiana, Kentucky, District of Columbia, Maryland, Delaware and New Jersey.*

*Outside those states we will allow 35 cents per one hundred pounds toward the transportation charges on orders totaling 300 pounds.*

*Please bear in mind that in spite of our reasonable quotations and the freight paid provision we commend Scott's Seed to you primarily on the grounds of superior quality. There is your real opportunity to save.*



## Legal Weight and Quantity per Acre

Weight Per Bu.      Pounds Sown Per Acre

<i>Legumes</i>		
Alfalfa .....	60	10 to 15
Clovers:		
Red .....	60	10 to 15
Mammoth .....	60	10 to 15
Alsike .....	60	5 to 8
Sweet .....	60	12 to 15 hulled seed
		15 to 20 unhulled seed
Crimson .....	60	10 to 14
White Dutch .....	60	6 to 8
Japan .....	25	5 to 7
Soybeans .....	60	90 to 150 drilled solid
		45 to 60 in rows
		6 to 8 with corn
Field Peas .....	60	90 to 100 with oats
Vetch .....	60	25 to 45 with 1 bu. rye
<i>Grasses</i>		
Canada Blue Grass .....	14*	20 to 30
Kentucky Blue Grass .....	14*	30 to 35
Orchard Grass .....	14	25 to 30
Meadow Fescue .....	24	20 to 24
Redtop .....	14*	14 to 20 solid seed
Tall Oat Grass .....	14	20 to 30
Timothy .....	45	10 to 15
Lawn Grass Seed .....		100
<i>Forage Crops</i>		
Dwarf Essex Rape .....	50	4 to 7
Millet .....	50	40 to 50
Sudan Grass .....	40	20 to 30
Sorghum or Cane .....	50	70 to 90
Sunflower .....	32	6 to 8
<i>Grain</i>		
Barley .....	48	90 to 100
Corn (field) .....	56	8 to 10
Oats .....	32	64
Rye .....	56	80 to 100
Wheat .....	60	120

\* Legal weights for grasses given, actual weight of re-cleaned seed much greater than that given.

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O. M. SCOTT & SONS  
COMPANY



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MARYSVILLE  
OHIO

